

# National Testing Agency

Question Paper Name :	89 Environmental Sciences 29th Sep 2020 Shift 2
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## 89 Environmental Sciences

Group Number :	1
Group Id :	21052957
Group Maximum Duration :	0
Group Minimum Duration :	180
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	300
Is this Group for Examiner? :	No

## PART I General Aptitude

Section Id :	21052995
Section Number :	1

Section type :

Mandatory or Optional :

Number of Questions :

Number of Questions to be attempted :

Section Marks :

Display Number Panel :

Group All Questions :

Mark As Answered Required? :

Sub-Section Number :

Sub-Section Id :

Question Shuffling Allowed :

Online



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Mandatory

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42

42

100

Yes

Yes

Yes

1

210529303

Yes

Question Id : 2105297939 Question Type : COMPREHENSION Sub Question Shuffling Allowed :

Yes Group Comprehension Questions : No

Question Numbers : (1 to 5)

Question Label : Comprehension



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Based on the data in the table, answer the questions that follow

The following table embodies the details about the students of the different departments' A, B and C in a University for participating in the blood donation camp.

Participation in Blood Donation Camp - Data

Department	Percentage of Girls	Percentage of blood donating Girls*	Number of blood donating Boys*
A	25%	40%	48
B	40%	50%	75
C	30%	70%	39

\* - out of total blood donors

Sub questions

Question Number : 1 Question Id : 2105297940 Question Type : MCQ Option Shuffling : No

Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No



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**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

In case all the girls in the department 'A' donated blood, then the number of boys in the department 'A' who did not participate in the blood donation camp is

1. 32
2. 48
3. 60
4. 56

**Options :**

21052931201. 1

21052931202. 2

21052931203. 3

21052931204. 4

**Question Number : 2 Question Id : 2105297941 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The number of students who donated blood in the department 'C' is

1. 39
2. 91
3. 130
4. 169

**Options :**

21052931205. 1

21052931206. 2

21052931207. 3

21052931208. 4

**Question Number : 3 Question Id : 2105297942 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The number of girls in the department 'A' who donated blood is



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1. 32
2. 130
3. 55
4. 48

**Options :**

21052931209. 1
21052931210. 2
21052931211. 3
21052931212. 4

**Question Number : 4 Question Id : 2105297943 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

If 45 boys from the department 'B' did not donate blood, then the total number of students in the department 'B' is



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1. 120
2. 150
3. 80
4. 200

**Options :**

21052931213. 1
21052931214. 2
21052931215. 3
21052931216. 4

**Question Number : 5 Question Id : 2105297944 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



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What is the ratio of the number of blood donors in the department 'A' compared to the number of blood donors in 'B'?

1. 1:5
2. 2:5
3. 9:16
4. 8:15

**Options :**

21052931217. 1
21052931218. 2
21052931219. 3
21052931220. 4

**Question Id : 2105297939 Question Type : COMPREHENSION Sub Question Shuffling Allowed :**

**Yes Group Comprehension Questions : No**

**Question Numbers : (1 to 5)**

**Question Label : Comprehension**

निम्नलिखित तालिका में रक्तदान शिविर में भाग लेने वाले एक विश्वविद्यालय के तीन भिन्न विभागों A, B और C के विद्यार्थियों का विवरण दिया गया है। तालिका में दिए गए प्रदत्त के आधार पर प्रश्नों के उत्तर दीजिए :

रक्तदान शिविर में प्रतिभागिता - प्रदत्त

विभाग	लड़कियों का प्रतिशत	रक्तदान करने वाली लड़कियों* का प्रतिशत	रक्तदान करने वाले लड़कों* की संख्या
A	25%	40%	48
B	40%	50%	75
C	30%	70%	39

\* - कुल रक्तदाताओं में से

**Sub questions**

**Question Number : 1 Question Id : 2105297940 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

यदि विभाग A की सभी लड़कियों ने रक्तदान किया है तो रक्तदान में भाग न लेने वाले विभाग A के विद्यार्थियों की संख्या है:

1. 32
2. 48
3. 60
4. 56

**Options :**

21052931201. 1
21052931202. 2
21052931203. 3
21052931204. 4

**Question Number : 2 Question Id : 2105297941 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

रक्तदान में भाग लेने वाले विभाग 'C' के विद्यार्थियों की संख्या है :

1. 39
2. 91
3. 130
4. 169

**Options :**

21052931205. 1
21052931206. 2
21052931207. 3
21052931208. 4

**Question Number : 3 Question Id : 2105297942 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

रक्तदान में भाग लेने वाली विभाग 'A' की लड़कियों की संख्या है :

1. 32
2. 130
3. 55
4. 48

**Options :**

21052931209. 1
21052931210. 2
21052931211. 3
21052931212. 4

**Question Number : 4 Question Id : 2105297943 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

यदि विभाग 'B' के 45 लड़कों ने रक्तदान नहीं किया है तो विभाग 'B' में विद्यार्थियों की कुल संख्या है :

1. 120
2. 150
3. 80
4. 200

**Options :**

21052931213. 1
21052931214. 2
21052931215. 3
21052931216. 4

**Question Number : 5 Question Id : 2105297944 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

विभाग 'B' के रक्तदानदाताओं की संख्या की तुलना में विभाग 'A' के रक्तदानदाताओं की संख्या का क्या अनुपात है :

1. 1 : 5
2. 2 : 5
3. 9 : 16
4. 8 : 15

**Options :**

21052931217. 1
21052931218. 2
21052931219. 3
21052931220. 4

**Sub-Section Number :**

2

**Sub-Section Id :**

210529304

**Question Shuffling Allowed :**

Yes

**Question Number : 6 Question Id : 2105297945 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

If your students are identified as 'Unable but willing' in terms of their performance readiness level, which of the following methods of teaching will be considered appropriate to deal with them?

1. Giving challenging tasks during teaching
2. Providing scope for sharing responsibility and recognition
3. Mentoring and guiding with close supervision
4. Small step presentations with error free tasks and frequent reinforcement

**Options :**

21052931221. 1
21052931222. 2
21052931223. 3
21052931224. 4

**Question Number : 6 Question Id : 2105297945 Question Type : MCQ Option Shuffling : No**

Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No

Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

यदि आपके विद्यार्थियों की पहचान निष्पादन तत्परता स्तर की दृष्टि से 'अक्षम, किंतु इच्छुक' के रूप में की जाती है तो उनके लिए निम्नलिखित में से कौनसी शिक्षण विधि को उपयुक्त माना जाएगा ?

1. शिक्षण के दौरान चुनौतीपूर्ण कार्य देना।
2. उत्तरदायित्व और मान्यता साझा करने की गुंजाइश प्रदान करना।
3. निकट के पर्यवेक्षण के साथ प्रतिपालन और मार्गदर्शन।
4. लघु पदीय प्रस्तुतियां, जिनमें त्रुटिहीन कार्य एवं प्रबलन की बारम्बारिता हो।

Options :

21052931221. 1

21052931222. 2

21052931223. 3

21052931224. 4

Question Number : 7 Question Id : 2105297946 Question Type : MCQ Option Shuffling : No

Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No

Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Identify from the following list of competencies of teaching, those which are related to personality and attitude

- A. Managing
- B. Monitoring
- C. Locus of control
- D. Planning
- E. Self-efficacy

Choose the **correct** answer from the options given below:

1. A and B only
2. B and C only
3. C and D only
4. C and E only

Options :

21052931225. 1

21052931226. 2

21052931227. 3

21052931228. 4

**Question Number : 7 Question Id : 2105297946 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

शिक्षण की निम्नलिखित सक्षमताओं की सूची में से उनकी पहचान कीजिए, जो व्यक्तित्व और अभिवृत्ति से संबंधित हैं :

- A. प्रबंधन करना
- B. अनुश्रवण करना
- C. नियंत्रण की संस्थिति
- D. नियोजन
- E. आत्म-प्रभावोत्पादकता

नीचे दिए गए विकल्पों में से सही उत्तर चुनिये :

- 1. केवल A और B
- 2. केवल B और C
- 3. केवल C और D
- 4. केवल C और E

**Options :**

21052931225. 1

21052931226. 2

21052931227. 3

21052931228. 4

**Question Number : 8 Question Id : 2105297947 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

Correct Marks : 2 Wrong Marks : 0

Match **List I** with **List II**

List I	List II
Assessment and Test interpretation methods	Description
A. Formative assessment	I. The test data help us to determine a student's rank
B. Summative assessment	II. The test data tell us about a student's level of proficiency
C. Norm-referenced testing	III. The intention in the evaluation is to identify scope for improvement
D. Criterion-referencing testing	IV. Evaluation is in the form of judgment to be used for at least immediate future

Choose the **correct** answer from the options given below:

1. A - I, B - II, C - III, D - IV
2. A - III, B - IV, C - I, D - II
3. A - IV, B - III, C - II, D - I
4. A - II, B - I, C - IV, D - III

**Options :**

21052931229. 1

21052931230. 2

21052931231. 3

21052931232. 4

**Question Number : 8 Question Id : 2105297947 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

Correct Marks : 2 Wrong Marks : 0

सूची-I को सूची-II से सुमेलित कीजिए। सूची-I में मूल्यांकन और परीक्षण व्याख्या विधियाँ दी गई हैं तथा सूची-II में उसका वर्णन दिया गया है।

सूची-I	सूची-II
A. निर्माणात्मक मूल्यांकन	I. परीक्षण प्रदत्त हमें विद्यार्थी की अनुस्थिति को निर्धारित करने में सहायता करते हैं।
B. संकलनात्मक मूल्यांकन	II. परीक्षण प्रदत्त हमें विद्यार्थी की प्रवीणता के स्तर के बारे में बताते हैं।
C. मानक-संदर्भित परीक्षण	III. आकलन का उद्देश्य सुधार की गुंजाइश की पहचान करना है।
D. निकष-संदर्भित परीक्षण	IV. कम से कम तात्कालिक भावी संदर्भ हेतु मूल्यांकन का स्वरूप निर्णयपरक होता है।

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

1. A - I, B - II, C - III, D - IV
2. A - III, B - IV, C - I, D - II
3. A - IV, B - III, C - II, D - I
4. A - II, B - I, C - IV, D - III

**Options :**

21052931229. 1

21052931230. 2

21052931231. 3

21052931232. 4

**Question Number : 9 Question Id : 2105297948 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



Given below are two statements

**Statement I:** ICT based 'teaching support system' has the potential to optimize learning outcomes

**Statement II:** Recent research have reported that factors relating to social competence contribute more to learning than mere cognitive intelligence does

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

**Options :**

21052931233. 1

21052931234. 2

21052931235. 3

21052931236. 4

**Question Number : 9 Question Id : 2105297948 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

नीचे दो कथन दिए गए हैं :

कथन-I : आई. सी. टी. - आधारित 'शिक्षण सहायता प्रणाली' में अधिगम परिणामों को इष्टतम बनाने की संभाव्यता होती है।

कथन-II : नवीनतम शोधों से यह प्रकाश में आया है कि सामाजिक सामर्थ्य से संबंधित कारक केवल संज्ञानात्मक प्रज्ञा की तुलना में अधिगम के लिए अधिक योगदान करते हैं।

उपर्युक्त कथनों के आलोक में निम्नांकित विकल्पों में से सही उत्तर चुनें :

1. कथन I और II दोनों सही हैं।
2. कथन I और II दोनों गलत हैं।
3. कथन-I सत्य है, किन्तु कथन-II गलत है।
4. कथन-I असत्य है, किन्तु कथन-II सही है।

**Options :**

21052931233. 1

21052931234. 2

21052931235. 3

21052931236. 4

**Question Number : 10 Question Id : 2105297949 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

A university teacher proposes a research project on 'why parents are apathetic to the university programmes'. Which of the following research methods will be most appropriate for the project?

1. Experimental method
2. Historical method
3. Participant-observation method
4. Ex post facto method

**Options :**

21052931237. 1

21052931238. 2

21052931239. 3

21052931240. 4

**Question Number : 10 Question Id : 2105297949 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

विश्वविद्यालय का एक शिक्षक इस बारे में एक शोध परियोजना प्रस्तावित करता है कि "माता-पिता विश्वविद्यालय के कार्यक्रमों के प्रति क्यों उदासीन रहते हैं?" निम्नलिखित में से कौनसी विधि इस परियोजना के लिए सर्वाधिक उपयुक्त होगी?

1. प्रयोगात्मक विधि
2. ऐतिहासिक विधि
3. प्रतिभागी - प्रेक्षणपरक विधि
4. कार्योत्तर विधि

**Options :**

21052931237. 1

21052931238. 2

21052931239. 3

21052931240. 4

**Question Number : 11 Question Id : 2105297950 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

In which level of teaching there is optimum scope for cognitive interchange requiring analysis and synthesis?

1. Memory level teaching
2. Understanding level teaching
3. Reflective level teaching
4. Autonomous development level teaching

**Options :**

21052931241. 1

21052931242. 2

21052931243. 3

21052931244. 4

**Question Number : 11 Question Id : 2105297950 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

निम्नलिखित में से किस स्तर में संज्ञानात्मक अंतर्विनिमय की इष्टतम गुंजाइश होती है, जिसके लिए विश्लेषण और संश्लेषण अपेक्षित होता है ?

1. स्मृति स्तर शिक्षण
2. अवबोध स्तर शिक्षण
3. विमर्शी स्तर शिक्षण
4. स्वायत्त विकास स्तरीय शिक्षण

**Options :**

21052931241. 1

21052931242. 2

21052931243. 3

21052931244. 4

**Question Number : 12 Question Id : 2105297951 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements

**Statement I:** Reliability is a necessary but insufficient condition for validity aspect of a research tool

**Statement II:** Validity is threatened when a test measures only the construct it is designed to measure in a research

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

**Options :**

21052931245. 1

21052931246. 2

21052931247. 3

21052931248. 4

**Question Number : 12 Question Id : 2105297951 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

नीचे दो कथन दिए गए हैं :

कथन-I : किसी शोध उपकरण में विश्वसनीयता एक आवश्यक अपेक्षा है, लेकिन वैधता के लिए पर्याप्त नहीं है।

कथन-II : शोध में जब कोई परीक्षण केवल उन्हीं विशिष्ट संप्रत्ययों का मापन करता है जिनके मापनार्थ अभिकल्पित होता है तो परीक्षण की वैधता को खतरा होता है।

उपर्युक्त कथनों के आलोक में निम्नांकित विकल्पों में से सर्वाधिक उपयुक्त उत्तर चुनें :

1. कथन I और II दोनों सही हैं।
2. कथन I और II दोनों सही नहीं हैं।
3. कथन-I सही है, किन्तु कथन-II सही नहीं है।
4. कथन-I सही नहीं है, किन्तु कथन-II सही है।

**Options :**

21052931245. 1

21052931246. 2

21052931247. 3

21052931248. 4

**Question Number : 13 Question Id : 2105297952 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Identify the features of scientific method from the following list

- A. Clearly defined variables and procedures
- B. Empirically verifiable hypotheses
- C. Little or no scope for self correction
- D. Linguistic justification of conclusions
- E. Ability to rule out rival hypotheses

Choose the **correct** answer from the options given below:

1. A, B and E only
2. B, C and D only
3. C, D and E only
4. B, D and E only

**Options :**

21052931249. 1

21052931250. 2

21052931251. 3

21052931252. 4

**Question Number : 13 Question Id : 2105297952 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

निम्नलिखित सूची में से वैज्ञानिक विधि की विशेषताओं की पहचान कीजिए :

- A. स्पष्ट रूप से परिभाषित चर और पद्धतियां
- B. इन्द्रियानुभाविक रूप से सत्यापनीय परिकल्पनाएं
- C. स्व-संशोधनार्थ बिलकुल नहीं या स्वल्प गुंजाइश
- D. निष्कर्षों का भाषायी औचित्य
- E. प्रतिस्पर्धी परिकल्पनाओं को नकारने की सक्षमता

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

- 1. केवल A, B और E
- 2. केवल B, C और D
- 3. केवल C, D और E
- 4. केवल B, D और E

**Options :**

21052931249. 1

21052931250. 2

21052931251. 3

21052931252. 4

**Question Number : 14 Question Id : 2105297953 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

From the point of view of research ethics which of the following is least vulnerable in research?

1. Problem-formulation and identifying the variables involved
2. Data analysis and interpretation
3. Reporting of research result and their implications
4. Citing a theory in support of one's thesis

**Options :**

21052931253. 1  
21052931254. 2  
21052931255. 3  
21052931256. 4

**Question Number : 14 Question Id : 2105297953 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

शोध आचार संहिता की दृष्टि से निम्नलिखित में से कौनसा शोध में न्यूनतम रूप से अनाहत है ?

1. समस्या निरूपण और चरों की पहचान में
2. प्रदत्त विश्लेषण और निर्वचन
3. शोध के परिणाम और उनके निहितार्थ को प्रस्तुत करना
4. अपनी स्थापना के समर्थन में किसी सिद्धांत को उद्धृत करना

**Options :**

21052931253. 1  
21052931254. 2  
21052931255. 3  
21052931256. 4

**Question Number : 15 Question Id : 2105297954 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

Which of the following sampling methods in research are non-probability based?

- A. Cluster sampling method
- B. Dimensional sampling method
- C. Random sampling method
- D. judgement sampling method
- E. Snowball sampling method

Choose the **correct** answer from the options given below:

- 1. B, C and D only
- 2. A, B and C only
- 3. B, D and E only
- 4. C, D and E only

**Options :**

21052931257. 1

21052931258. 2

21052931259. 3

21052931260. 4

**Question Number : 15 Question Id : 2105297954 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**



निम्नलिखित में से कौनसी प्रतिचयन विधियां शोध में असंभाव्यता - आधारित हैं?



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- A. गुच्छ / समूह प्रतिचयन विधि
- B. विमात्मक प्रतिचयन विधि
- C. यादृच्छिक प्रतिचयन विधि
- D. निर्णयपरक प्रतिचयन विधि
- E. स्नोबॉल प्रतिचयन विधि

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

- 1. केवल B, C और D
- 2. केवल A, B और C
- 3. केवल B, D और E
- 4. केवल C, D और E

**Options :**

21052931257. 1

21052931258. 2

21052931259. 3

21052931260. 4



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**Question Number : 16 Question Id : 2105297955 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Communication stimuli used to convey the message are known as

- 1. Process
- 2. Power
- 3. Channel
- 4. Codes

**Options :**

21052931261. 1

21052931262. 2

21052931263. 3

21052931264. 4



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Question Number : 16 Question Id : 2105297955 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical  
Correct Marks : 2 Wrong Marks : 0

संदेशों को सम्प्रेषित करने के लिए प्रयुक्त किए गए सम्प्रेषण उद्दीपक को किस नाम से जाना जाता है ?

1. प्रक्रिया
2. शक्ति
3. संवाहिका
4. कूट

Options :

21052931261. 1  
21052931262. 2  
21052931263. 3  
21052931264. 4

Question Number : 17 Question Id : 2105297956 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical  
Correct Marks : 2 Wrong Marks : 0

Communication activities of learners fall into domains consisting of

- A. Perception
- B. Groupism
- C. Inter-personal skills
- D. Regressive behavior
- E. Inter-personal relations

Choose the **correct** answer from the options given below:

1. A, B and C only
2. A, C and E only
3. A, C and D only
4. A, D and E only

Options :

21052931265. 1

21052931266. 2

21052931267. 3

21052931268. 4

**Question Number : 17 Question Id : 2105297956 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

अधिगमकर्ता के सम्प्रेषण क्रियाकलाप किस अनुक्षेत्र में आते हैं ?

- A. प्रत्यक्षीकरण
- B. समूहवाद
- C. अंतर - वैयक्तिक कौशल
- D. प्रतिगमनात्मक व्यवहार
- E. अंतर - वैयक्तिक संबंध

नीचे दिए गए विकल्पों में से सही उत्तर चुनिये :

- 1. केवल A, B और C
- 2. केवल A, C और E
- 3. केवल A, C और D
- 4. केवल A, D और E

**Options :**

21052931265. 1

21052931266. 2

21052931267. 3

21052931268. 4

**Question Number : 18 Question Id : 2105297957 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements, one is labelled as **Assertion A** and the other is labelled as

**Reason R**

**Assertion A:** New media enhance the opportunities to expand the learning environment unheard of before

**Reason R:** Learners can design their own learning process

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
2. Both **A** and **R** are correct but **R** is **NOT** the correct explanation of **A**
3. **A** is correct but **R** is not correct
4. **A** is not correct but **R** is correct

**Options :**

21052931269. 1

21052931270. 2

21052931271. 3

21052931272. 4

**Question Number : 18 Question Id : 2105297957 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

नीचे दो कथन दिए गए हैं : एक को अभिकथन (A) और दूसरे को तर्क (R) कहा गया है :

अभिकथन (A) : नव-मीडिया अधिगम परिवेश के विस्तार के लिए अवसरों का संवर्धन करता है, जिसके बारे में पहले कभी नहीं सुना गया।

तर्क (R) : अधिगमकर्ता स्वयं अपनी अधिगम प्रक्रिया की अभिकल्पना कर सकता है।

उपर्युक्त कथनों के आलोक में निम्नांकित विकल्पों में से सर्वाधिक उपयुक्त उत्तर चुनें :

1. (A) और (R) दोनों सही हैं और (R), (A) की सही व्याख्या है।
2. (A) और (R) दोनों सही हैं और (R), (A) की सही व्याख्या नहीं है।
3. (A) सही है परन्तु (R) सही नहीं है।
4. (A) सही नहीं है परन्तु (R) सही है।

**Options :**

21052931269. 1

21052931270. 2

21052931271. 3

21052931272. 4

**Question Number : 19 Question Id : 2105297958 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The sequence of elements in linear model of communication is

- A. Message
- B. Decoder
- C. Encoder
- D. Medium
- E. Noise

Choose the **correct** answer from the options given below

- 1. A, C, B, E, D
- 2. B, D, C, A, E
- 3. C, A, D, E, B
- 4. D, E, C, A, B

**Options :**

21052931273. 1

21052931274. 2

21052931275. 3

21052931276. 4

**Question Number : 19 Question Id : 2105297958 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

सम्प्रेषण के रैखिक प्रतिमान में घटकों का अनुक्रम है :

- A. संदेश
- B. विसंकेतक
- C. संकेतक
- D. माध्यम
- E. शोर

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

- 1. A, C, B, E, D
- 2. B, D, C, A, E
- 3. C, A, D, E, B
- 4. D, E, C, A, B

**Options :**

21052931273. 1

21052931274. 2

21052931275. 3

21052931276. 4

**Question Number : 20 Question Id : 2105297959 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

List I	List II
A. Poor listeners	I. Scold others
B. Aggressive listeners	II. Easily agree with the speaker
C. Positive listener	III. Listen to ideas not understanding emotions
D. Pseudo-intellectual listeners	IV. Fidget compulsively

Choose the **correct** answer from the options given below:

1. A - I, B - II, C - III, D - IV
2. A - II, B - III, C - IV, D - I
3. A - III, B - IV, C - I, D - II
4. A - IV, B - I, C - II, D - III

**Options :**

21052931277. 1

21052931278. 2

21052931279. 3

21052931280. 4

**Question Number : 20 Question Id : 2105297959 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

सूची-I को सूची-II से सुमेलित कीजिए :

सूची-I	सूची-II
A. अक्षम श्रोता	I. अन्य को डराते हैं
B. आक्रामक श्रोता	II. आसानी से वक्ता के साथ सहमत होते हैं
C. निष्पक्ष श्रोता	III. भावनाओं पर बल न देकर विचारों को सुनते हैं।
D. छद्म बौद्धिक श्रोता	IV. बाध्यकारी व्यावर्तक व्यवहार प्रदर्शित करते हैं।

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

1. A - I, B - II, C - III, D - IV
2. A - II, B - III, C - IV, D - I
3. A - III, B - IV, C - I, D - II
4. A - IV, B - I, C - II, D - III

**Options :**

21052931277. 1

21052931278. 2

21052931279. 3

21052931280. 4

**Question Number : 21 Question Id : 2105297960 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

A train is travelling at a speed of 96 kilometres per hour. It takes 3 seconds to enter a tunnel and 30 seconds more to pass through it completely. Which of the following statements are correct?

- A. Length of the tunnel is 100 meters
- B. Tunnel is longer than train
- C. Train is longer than tunnel
- D. Length of the train is 80 meters
- E. Length of the tunnel in 800 meters

Choose the **correct** answer from the options given below:

- 1. A, C and D only
- 2. A and B only
- 3. C and D only
- 4. B, D and E only

**Options :**

21052931281. 1

21052931282. 2

21052931283. 3

21052931284. 4

**Question Number : 21 Question Id : 2105297960 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**



**Correct Marks : 2 Wrong Marks : 0**

एक रेलगाड़ी प्रति घंटा 96 किलोमीटर की गति से चलती है। वह एक सुरंग में प्रवेश करने में 30 सेकण्ड लगाती है और उसको पूरी तरह पार करने में 30 सेकण्ड और लगाती है। निम्नलिखित में से कौनसा कथन सही है ?

- A. सुरंग की लम्बाई 100 मीटर है।
- B. सुरंग रेलगाड़ी की तुलना में अधिक लंबी है।
- C. रेलगाड़ी सुरंग से अधिक लंबी है।
- D. रेलगाड़ी की लंबाई 80 मीटर है।
- E. सुरंग की लंबाई 800 मीटर है।

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

- 1. केवल A, C और D
- 2. केवल A और B
- 3. केवल C और D
- 4. केवल B, D और E

**Options :**

21052931281. 1

21052931282. 2

21052931283. 3

21052931284. 4

**Question Number : 22 Question Id : 2105297961 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The difference between the ages of two men is 10 years. 15 years ago, the elder one was twice as old as the younger one. The present age of the elder man is

- 1. 25 years
- 2. 35 years
- 3. 45 years
- 4. 40 years

**Options :**

21052931285. 1

21052931286. 2

21052931287. 3

21052931288. 4

**Question Number : 22 Question Id : 2105297961 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

दो व्यक्तियों के उम्र में 10 साल का अंतर है। 15 साल पहले ज्येष्ठ व्यक्ति की उम्र कनिष्ठ से दुगुनी थी तो वर्तमान में ज्येष्ठ व्यक्ति की उम्र क्या है ?

1. 25 वर्ष
2. 35 वर्ष
3. 45 वर्ष
4. 40 वर्ष

**Options :**

21052931285. 1

21052931286. 2

21052931287. 3

21052931288. 4

**Question Number : 23 Question Id : 2105297962 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

List I	List II
<b>For two numbers 84 and 96</b>	<b>Result</b>
A. HCF	I. 672
B. LCM	II. 8064
C. Product	III. 180
D. Sum	IV. 12

Choose the **correct** answer from the options given below:

1. A - I, B - IV, C - III, D - II
2. A - I, B - IV, C - II, D - III
3. A - II, B - IV, C - I, D - III
4. A - IV, B - I, C - II, D - III

**Options :**

21052931289. 1

21052931290. 2

21052931291. 3

21052931292. 4

**Question Number : 23 Question Id : 2105297962 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

दो संख्याओं 84 और 96 के लिए सूची-I को सूची-II में दिये गए परिणाम से सुमेलित कीजिए :

सूची-I	सूची-II
A. एच सी एफ	I. 672
B. एल सी एम	II. 8064
C. गुणनफल	III. 180
D. योग	IV. 12

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

1. A - I, B - IV, C - III, D - II
2. A - I, B - IV, C - II, D - III
3. A - II, B - IV, C - I, D - III
4. A - IV, B - I, C - II, D - III

**Options :**

21052931289. 1

21052931290. 2

21052931291. 3

21052931292. 4

**Question Number : 24 Question Id : 2105297963 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements

**Statement I:** A number is divisible by 25, if the number formed by its last two digits is either (00) or divisible by (25)

**Statement II:** A number is divisible by 16, if the number formed by its last 4 digits is divisible by 16

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

**Options :**

21052931293. 1

21052931294. 2

21052931295. 3

21052931296. 4

**Question Number : 24 Question Id : 2105297963 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

नीचे दो कथन दिए गए हैं :

कथन-I : एक संख्या 25 द्वारा विभाज्य है, यदि इस संख्या के अंतिम दो अंक (00) या (25) से विभाज्य है।

कथन-II : एक संख्या 16 द्वारा विभाज्य है, यदि इस संख्या के अंतिम चार अंको द्वारा बनी संख्या 16 से विभाज्य है।

उपर्युक्त कथनों के आलोक में निम्नांकित विकल्पों में से सही उत्तर चुनें :

1. कथन I और II दोनों सही हैं।
2. कथन I और II दोनों गलत हैं।
3. कथन-I सत्य है, किन्तु कथन-II गलत है।
4. कथन-I असत्य है, किन्तु कथन-II सही है।

**Options :**

21052931293. 1

21052931294. 2

21052931295. 3

21052931296. 4

**Question Number : 25 Question Id : 2105297964 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Match **List I** with **List II**

List I	List II
A. Triangle Area	I. Base x height
B. Square Area	II. $1/2 \times (\text{Product of diagonals})$
C. Rhombus Area	III. $1/2 \times \text{Base} \times \text{Height}$
D. Parallelogram Area	IV. $(\text{Side})^2$

Choose the **correct** answer from the options given below:

1. A - II, B - IV, C - I, D - III
2. A - III, B - IV, C - II, D - I
3. A - III, B - IV, C - I, D - II
4. A - II, B - III, C - I, D - IV

**Options :**

21052931297. 1

21052931298. 2

21052931299. 3

21052931300. 4

**Question Number : 25 Question Id : 2105297964 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

सूची-I को सूची-II से सुमेलित कीजिए :

सूची-I	सूची-II
A. त्रिभुज का क्षेत्रफल	I. आधार x ऊँचाई
B. वर्ग क्षेत्रफल	II. $1/2 \times$ (विकर्णों का गुणनफल)
C. समचतुर्भुज का क्षेत्रफल	III. $1/2 \times$ आधार x ऊँचाई
D. समानांतर चतुर्भुज का क्षेत्रफल	IV. $(\text{भुजा})^2$

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

1. A - II, B - IV, C - I, D - III
2. A - III, B - IV, C - II, D - I
3. A - III, B - IV, C - I, D - II
4. A - II, B - III, C - I, D - IV

**Options :**

21052931297. 1

21052931298. 2

21052931299. 3

21052931300. 4

**Question Number : 26 Question Id : 2105297965 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

All flowers are toys. Some toys are trees. Some butterflies are trees, then



- A. No butterfly is flower
- B. Some butterflies are toys
- C. Some toys are flowers
- D. Some trees are flowers
- E. Some trees are butterflies

Choose the **correct** answer from the options given below:

- 1. A and B only
- 2. C and E only
- 3. B and E only
- 4. B and D only

**Options :**

21052931301. 1

21052931302. 2

21052931303. 3

21052931304. 4



**Question Number : 26 Question Id : 2105297965 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**



सभी पुष्प खिलौने हैं। कुछ खिलौने वृक्ष हैं। कुछ तितलियां वृक्ष हैं तो :

A. कोई भी तितली पुष्प नहीं है।

B. कुछ तितलियां खिलौने हैं।

C. कुछ खिलौने पुष्प हैं।

D. कुछ वृक्ष पुष्प हैं।

E. कुछ वृक्ष तितलियां हैं।

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

1. केवल A और B
2. केवल C और E
3. केवल B और E
4. केवल B और D

**Options :**

21052931301. 1

21052931302. 2

21052931303. 3

21052931304. 4

**Question Number : 27 Question Id : 2105297966 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

"Wherever there is smoke, there is fire.

There is smoke in Mr Verma's chamber.

There must be fire in Mr Verma's chamber."

In accordance with Indian logic, this is an example of

1. Pratyaksha pramana (Perception)
2. Upmana (Comparison)
3. Hetvabhasa (Fallacy)
4. Vyapti (Invariable relations)

**Options :**



21052931305. 1

21052931306. 2

21052931307. 3

21052931308. 4

**Question Number : 27 Question Id : 2105297966 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

" जहां कहीं धुआं है, वहां अग्नि है।

श्री वर्मा के कक्ष में धुआं है।

श्री वर्मा के कक्ष में अग्नि होनी चाहिए। "

भारतीय तर्कशास्त्र के अनुसार यह निम्नलिखित में से किसका उदाहरण है :

1. प्रत्यक्ष प्रमाण
2. उपमान
3. हेत्वाभास
4. व्याप्ति

**Options :**

21052931305. 1

21052931306. 2

21052931307. 3

21052931308. 4

**Question Number : 28 Question Id : 2105297967 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

In order to authenticate the environmental values as advocated by our ancestors, a scholar cites examples from Vedas. The means of knowledge used by him/her in terms of Indian logic will be called

1. Anumana (inference)
2. Arthapatti ( Implication)
3. Shabda (Verbal testimony)
4. Upamana (Comparison)

**Options :**

21052931309. 1

21052931310. 2

21052931311. 3

21052931312. 4

**Question Number : 28 Question Id : 2105297967 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

हमारे पूर्वजों द्वारा पक्षपोषित पर्यावरणीय मूल्यों का प्रमाण देने के लिए एक अध्वेता वेदों से उदाहरण उद्धृत करता है। भारतीय तर्कशास्त्र की दृष्टि से उसके द्वारा प्रयुक्त ज्ञान के साधन को क्या कहा जायेगा?

1. अनुमान
2. अर्थापत्ति
3. शब्द
4. उपमान

**Options :**

21052931309. 1

21052931310. 2

21052931311. 3

21052931312. 4

**Question Number : 29 Question Id : 2105297968 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

In the series B, D, H, J, N, P, ... What will come after P?

1. U
2. S
3. R
4. T

**Options :**

21052931313. 1

21052931314. 2

21052931315. 3

21052931316. 4

**Question Number : 29 Question Id : 2105297968 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

श्रृंखला B, D, H, J, N, P में P के बाद क्या आएगा ?

1. U
2. S
3. R
4. T

**Options :**

21052931313. 1

21052931314. 2

21052931315. 3

21052931316. 4

**Question Number : 30 Question Id : 2105297969 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

If LIGHT is written as GILTH and FIGHT is written as GIFTH, then SIGHT will be written as

1. GISHT
2. GISTH
3. GSITH
4. GSIHT

**Options :**

21052931317. 1
21052931318. 2
21052931319. 3
21052931320. 4

**Question Number : 30 Question Id : 2105297969 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

यदि LIGHT को GILTH के रूप में लिखा जाता है और FIGHT को GIFTH के रूप में लिखा जाता है तो SIGHT को किस रूप में लिखा जाएगा ?

1. GISHT
2. GISTH
3. GSITH
4. GSIHT

**Options :**

21052931317. 1
21052931318. 2
21052931319. 3
21052931320. 4

**Question Number : 31 Question Id : 2105297970 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

GUI stands for

1. Graphical Usage Interaction
2. Gaming User Interface
3. Graphical user Interface
4. Graphical User Interaction

**Options :**

21052931321. 1
21052931322. 2
21052931323. 3
21052931324. 4

**Question Number : 31 Question Id : 2105297970 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

जी.यू.ई. का क्या तात्पर्य है :

1. ग्राफिकल यूसेज इंटरएक्शन
2. गेमिंग यूजर इंटरफेस
3. ग्राफिकल यूजर इंटरफेस
4. ग्राफिकल यूजर इंटरएक्शन

**Options :**

21052931321. 1
21052931322. 2
21052931323. 3
21052931324. 4

**Question Number : 32 Question Id : 2105297971 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements

**Statement I:** Operating systems are hardware

**Statement II:** Algorithm is a step by step procedure to solve a problem

In light of the above statements, choose the **correct** answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is correct but Statement II is false
4. Statement I is incorrect but Statement II is true

**Options :**

21052931325. 1

21052931326. 2

21052931327. 3

21052931328. 4

**Question Number : 32 Question Id : 2105297971 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

नीचे दो कथन दिए गए हैं :

कथन-I : ऑपरेटिंग सिस्टम्स हार्डवेयर हैं।

कथन-II : ऐल्गोरिथ्म विधि किसी समस्या के समाधान की चरण-दर-चरण पद्धति है।

उपर्युक्त कथनों के आलोक में निम्नांकित विकल्पों में से सही उत्तर चुनें :

1. कथन I और II दोनों सही हैं।
2. कथन I और II दोनों गलत हैं।
3. कथन-I सत्य है, किन्तु कथन-II गलत है।
4. कथन-I असत्य है, किन्तु कथन-II सही है।

**Options :**

21052931325. 1

21052931326. 2

21052931327. 3

21052931328. 4

Question Number : 33 Question Id : 2105297972 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Given below are two statements

**Statement I:** Compilers are software

**Statement II:** Touch screen monitors are input/output devices

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

**Options :**

21052931329. 1

21052931330. 2

21052931331. 3

21052931332. 4

Question Number : 33 Question Id : 2105297972 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

नीचे दो कथन दिए गए हैं :

कथन-I : कम्पाइलर्स सॉफ्टवेयर हैं।

कथन-II : टच स्क्रीन मॉनीटर्स आगत/निर्गत उपकरण हैं।

उपर्युक्त कथनों के आलोक में निम्नांकित विकल्पों में से सही उत्तर चुनें :

1. कथन I और II दोनों सही हैं।
2. कथन I और II दोनों गलत हैं।
3. कथन-I सत्य है, किन्तु कथन-II गलत है।
4. कथन-I असत्य है, किन्तु कथन-II सही है।

**Options :**

21052931329. 1

21052931330. 2

21052931331. 3

21052931332. 4

**Question Number : 34 Question Id : 2105297973 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Match **List I** with **List II**

List I	List II
A. Image	I. .doc
B. Video	II. .mp3
C. Audio	III. .jpeg
D. Word processing	IV. .mpeg

Choose the **correct** answer from the options given below:

1. A - I, B - II, C - III, D - IV
2. A - III, B - IV, C - II, D - I
3. A - II, B - III, C - IV, D - I
4. A - I, B - IV, C - III, D - II

**Options :**

21052931333. 1

21052931334. 2

21052931335. 3

21052931336. 4

**Question Number : 34 Question Id : 2105297973 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



सूची-I को सूची-II के साथ सुमेलित कीजिए :

सूची-I	सूची-II
A. इमेज	I. .डी ओ सी
B. वीडियो	II. .एम पी3
C. ऑडियो	III. .जे पी ई जी
D. वर्ड प्रोसेसिंग	IV. .एम पी ई जी

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

1. A - I, B - II, C - III, D - IV
2. A - III, B - IV, C - II, D - I
3. A - II, B - III, C - IV, D - I
4. A - I, B - IV, C - III, D - II

**Options :**

21052931333. 1

21052931334. 2

21052931335. 3

21052931336. 4

**Question Number : 35 Question Id : 2105297974 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Match **List I** with **List II**

List I	List II
A. Search engine	I. www.gmail.com
B.Job openings	II. www.amazon.in
C. E-mail	III. www.google.com
D. E-commerce	IV. www.naukri.com

Choose the **correct** answer from the options given below:

1. A - III, B - IV, C - I, D - II
2. A - IV, B - III, C - I, D - II
3. A - I, B - II, C - III, D - IV
4. A - I, B - III, C - II, D - IV

**Options :**

21052931337. 1

21052931338. 2

21052931339. 3

21052931340. 4

**Question Number : 35 Question Id : 2105297974 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

सूची-I को सूची-II से सुमेलित कीजिए :

सूची-I	सूची-II
A. सर्च इंजन	I. www.gmail.com
B. जॉब ऑपेनिंग्स	II. www.amazon.in
C. ई-मेल	III. www.google.com
D. ई-कॉमर्स	IV. www.naukari.com

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

1. A - III, B - IV, C - I, D - II
2. A - IV, B - III, C - I, D - II
3. A - I, B - II, C - III, D - IV
4. A - I, B - III, C - II, D - IV

**Options :**

21052931337. 1

21052931338. 2

21052931339. 3

21052931340. 4

**Question Number : 36 Question Id : 2105297975 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Identify the correct sequence of countries contributing to global CO<sub>2</sub> emission in decreasing order from fossil fuel burning, cement manufacturing and gas flaring in the year 2014

- A. USA
- B. EU-28
- C. China
- D. Russia

Choose the **correct** answer from the options given below

- 1. C, A, B, D
- 2. A, C, B, D
- 3. A, B, C, D
- 4. A, C, D, B

**Options :**

- 21052931341. 1
- 21052931342. 2
- 21052931343. 3
- 21052931344. 4

**Question Number : 36 Question Id : 2105297975 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

वर्ष 2014 में जीवाश्म ईंधन के जलने, सीमेंट के निर्माण और गैस के प्रज्वलित होने के कारण वैश्विक CO<sub>2</sub> के उत्सर्जन में योगदान करने वाले देशों के घटते क्रम की पहचान कीजिए :

- A. संयुक्त राज्य अमेरिका
- B. ई यू - 28
- C. चीन
- D. रूस

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

- 1. C, A, B, D
- 2. A, C, B, D
- 3. A, B, C, D
- 4. A, C, D, B

**Options :**

- 21052931341. 1
- 21052931342. 2
- 21052931343. 3
- 21052931344. 4

**Question Number : 37 Question Id : 2105297976 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following are used as semiconductor materials to fabricate solar cells

- A. Silicon (Si)
- B. Tin oxide (SnO)
- C. Cadmium Sulphide (CdS)
- D. Gallium Arsenide (GaAs)

Choose the **correct** answer from the options given below:

- 1. A and C only
- 2. A and B only
- 3. B, C and D only
- 4. A, B, C and D

**Options :**

- 21052931345. 1
- 21052931346. 2
- 21052931347. 3
- 21052931348. 4

**Question Number : 37 Question Id : 2105297976 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

निम्नलिखित में से किसका 'सोलर सेल्स' के निर्माण में सेमीकंडक्टर के रूप में उपयोग किया जाता है?

- A. सिलिकॉन (Si)
- B. टिन ऑक्साइड (SnO)
- C. कैडमियम सल्फाइड (CdS)
- D. गैलीयम आर्सेनाइड (GaAs)

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

- 1. केवल A और C
- 2. केवल A और B
- 3. केवल B, C और D
- 4. A, B, C और D

**Options :**

- 21052931345. 1
- 21052931346. 2
- 21052931347. 3
- 21052931348. 4

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**Question Number : 38 Question Id : 2105297977 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following is **not** a Sustainable Development Goal?

- 1. Gender equity
- 2. Climate action
- 3. Protection of Ozone layer
- 4. Life below water

**Options :**

- 21052931349. 1
- 21052931350. 2
- 21052931351. 3
- 21052931352. 4

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Question Number : 38 Question Id : 2105297977 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

निम्नलिखित में से कौनसा सतत विकासलक्ष्य नहीं है ?

1. लैंगिक निष्पक्षता
2. जलवायु संबंधी पहल
3. ओज़ोन परत का संरक्षण
4. अंतर्वर्ती जलीय जीवन

Options :

21052931349. 1

21052931350. 2

21052931351. 3

21052931352. 4

Question Number : 39 Question Id : 2105297978 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match **List I** with **List II**

List I	List II
Pathogens in water	Disease they cause
A. Virus	I. Cholera
B. Bacteria	II. Schistosomiasis
C. Protozoa	III. Hepatitis
D. Helminths (Parasitic worm)	IV. Dysentery

Choose the **correct** answer from the options given below:

1. A - I, B - III, C - IV, D - II
2. A - I, B - III, C - II, D - IV
3. A - III, B - I, C - II, D - IV
4. A - III, B - I, C - IV, D - II

Options :

21052931353. 1

21052931354. 2

21052931355. 3

21052931356. 4

**Question Number : 39 Question Id : 2105297978 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

सूची-I को सूची-II से सुमेलित कीजिए :

सूची-I	सूची-II
जल में रोगाणु	वे बीमारियां, जो उत्पन्न करते हैं
A. विषाणु	I. हैजा
B. जीवाणु	II. शिस्टोसोमियन्स
C. प्रोटोजोआ	III. हेपेटाइटिस
D. हेल्मिन्थ्स (परजीवी कीट)	IV. पेचिश

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

1. A - I, B - III, C - IV, D - II
2. A - I, B - III, C - II, D - IV
3. A - III, B - I, C - II, D - IV
4. A - III, B - I, C - IV, D - II

**Options :**

21052931353. 1

21052931354. 2

21052931355. 3

21052931356. 4

**Question Number : 40 Question Id : 2105297979 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

Which among the following are emitted from a coal-based thermal power plant?

- A. Carbon monoxide
- B. Ozone
- C. Sulphur dioxide
- D. Methane
- E. Particulate matter

Choose the **correct** answer from the options given below:

- 1. A, B, C and E only
- 2. A, C and E only
- 3. A, B and C only
- 4. A, C, D and E only

**Options :**

21052931357. 1

21052931358. 2

21052931359. 3

21052931360. 4

**Question Number : 40 Question Id : 2105297979 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**



- A. कार्बन मॉनोऑक्साइड
- B. ओज़ोन
- C. सल्फर डाइऑक्साइड
- D. मीथेन
- E. पार्टिकुलेट मैटर

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

- 1. केवल A, B, C और E
- 2. केवल A, C और E
- 3. केवल A, B और C
- 4. केवल A, C, D और E

**Options :**

21052931357. 1

21052931358. 2

21052931359. 3

21052931360. 4

**Question Number : 41 Question Id : 2105297980 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements

**Statement I:** The three greatest challenges facing higher education in India, described by FICCI (2012) are expansion, equity and excellence

**Statement II:** While all three issues indicated in Statement I are inter-linked, equity to a large extent is dependent on expansion and access

In light of the above statements, choose the **most appropriate** answer from the options given below

- 1. Both Statement I and Statement II are true
- 2. Both Statement I and Statement II are false
- 3. Statement I is correct but Statement II is false
- 4. Statement I is incorrect but Statement II is true

**Options :**

21052931361. 1

21052931362. 2

21052931363. 3

21052931364. 4

**Question Number : 41 Question Id : 2105297980 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

नीचे दो कथन दिए गए हैं :

कथन-I : फिक्की (2012) ने भारत में उच्च शिक्षा के समक्ष तीन सबसे बड़ी चुनौतियां - विस्तार, न्याय (इक्विटी) और उत्कृष्टता बतलाई हैं।

कथन-II : कथन-I में इंगित यद्यपि सभी तीन मुद्दे अंतर-संबंधित हैं, लेकिन न्याय (इक्विटी) एक बड़ी सीमा तक विस्तार और अभिगम्यता पर निर्भर है।

उपर्युक्त कथनों के आलोक में निम्नांकित विकल्पों में से सही उत्तर चुनें :

1. कथन I और II दोनों सही हैं।
2. कथन I और II दोनों गलत हैं।
3. कथन-I सत्य है, किन्तु कथन-II गलत है।
4. कथन-I असत्य है, किन्तु कथन-II सही है।

**Options :**

21052931361. 1

21052931362. 2

21052931363. 3

21052931364. 4

**Question Number : 42 Question Id : 2105297981 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following are regulatory bodies within the Department of Higher Education in the Ministry of Human Resource Development in the Central Government?

- A. NUEPA
- B. UGC
- C. AICTE
- D. DEC
- E. ICSSR

Choose the **correct** answer from the options given below:

- 1. B, C and D only
- 2. A, B and C only
- 3. C, D and E only
- 4. A, D and E only

**Options :**

- 21052931365. 1
- 21052931366. 2
- 21052931367. 3
- 21052931368. 4

**Question Number : 42 Question Id : 2105297981 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

निम्नलिखित में से कौनसे केंद्र सरकार के मानव संसाधन विकास मंत्रालय में उच्च शिक्षा के विभाग के भीतर विनियामक निकाय हैं ?

- A. एन यू इ पी ए
- B. यू जी सी
- C. ए आई सी टी ई
- D. डी ई सी
- E. आई सी एस एस आर

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए :

- 1. केवल B, C और D
- 2. केवल A, B और C
- 3. केवल C, D और E
- 4. केवल A, D और E

**Options :**

- 21052931365. 1
- 21052931366. 2
- 21052931367. 3
- 21052931368. 4

**Question Number : 43 Question Id : 2105297982 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Identify from the following, features which describe most appropriately the Indian values

- A. Emphasis on individual ambition
- B. Emphasis on collectivism
- C. Emphasis on social progress
- D. Emphasis on social stability
- E. Emphasis on unity in diversity

Choose the **correct** answer from the options given below:

- 1. A, B and C only
- 2. B, C and D only
- 3. C, D and E only
- 4. B, D and E only

**Options :**

21052931369. 1

21052931370. 2

21052931371. 3

21052931372. 4

**Question Number : 43 Question Id : 2105297982 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

निम्नलिखित में से उन विशेषताओं की पहचान कीजिए, जो भारतीय मूल्यों का सर्वाधिक उपयुक्त ढंग से वर्णन करती हैं?

- A. व्यक्तिगत महत्वाकांक्षा पर बल
- B. समष्टिवाद पर बल
- C. सामाजिक उन्नति पर बल
- D. सामाजिक स्थायित्व पर बल
- E. विविधता में एकता पर बल

नीचे दिए गए विकल्पों में से सर्वाधिक उपयुक्त उत्तर चुनिए :

- 1. केवल A, B और C
- 2. केवल B, C और D
- 3. केवल C, D और E
- 4. केवल B, D और E

**Options :**

- 21052931369. 1
- 21052931370. 2
- 21052931371. 3
- 21052931372. 4

**Question Number : 44 Question Id : 2105297983 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements

**Statement I:** The UGC in India has statutory responsibility for maintenance of quality and coordination of institutions of higher education

**Statement II:** The NCTE being a regulatory body for teacher education in India comes under the control of UGC

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is correct but Statement II is false
4. Statement I is incorrect but Statement II is true

**Options :**

21052931373. 1

21052931374. 2

21052931375. 3

21052931376. 4

**Question Number : 44 Question Id : 2105297983 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

नीचे दो कथन दिए गए हैं :

कथन-I : भारत में उच्च शिक्षा संस्थानों की गुणवत्ता और समन्वय बनाए रखने का वैधानिक उत्तरदायित्व यू.जी.सी. का है।

कथन-II : एन. सी. टी. ई. भारत में शिक्षक शिक्षा का एक निकाय होने के नाते यू. जी. सी. के नियंत्रण के अंतर्गत आता है।

उपर्युक्त कथनों के आलोक में निम्नांकित विकल्पों में से सही उत्तर चुनें :

1. कथन I और II दोनों सही हैं।
2. कथन I और II दोनों गलत हैं।
3. कथन-I सत्य है, किन्तु कथन-II गलत है।
4. कथन-I असत्य है, किन्तु कथन-II सही है।

**Options :**

21052931373. 1

21052931374. 2

21052931375. 3

21052931376. 4

**Question Number : 45 Question Id : 2105297984 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

In university governance, who is the executive head?

1. The Chancellor
2. The Vice-Chancellor
3. The Registrar
4. The Education Secretary

**Options :**

21052931377. 1

21052931378. 2

21052931379. 3

21052931380. 4

**Question Number : 45 Question Id : 2105297984 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

निम्नलिखित में से कौनसा विश्वविद्यालय प्रशासन में कार्यकारी अध्यक्ष होता है ?

1. कुलाधिपति
2. कुलपति
3. कुल सचिव
4. शिक्षा सचिव

**Options :**

21052931377. 1

21052931378. 2

21052931379. 3



**Sub-Section Number :****Sub-Section Id :**

210529305

**Question Shuffling Allowed :**

Yes

**Question Id : 2105297985 Question Type : COMPREHENSION Sub Question Shuffling Allowed :****Yes Group Comprehension Questions : No****Question Numbers : (46 to 50)****Question Label : Comprehension****Read the given passage carefully and answer the questions that follow**

At the turn of the century, a dominant conception of the child as learner was that he was cognitively an "empty organism" responding more or less randomly to stimulation, and characteristically learning when specific responses were connected with specific stimuli through the meditation of pleasure or pain. The organism itself, it was believed, would do nothing to learn or think if it were not impelled to such activity by primary drives like hunger or thirst or by externally applied motives like reward and punishment. Experimenters in the laboratory were connecting correct responses of animals to puzzle boxes by giving or withholding food and teachers in the classroom were connecting correct responses of children to problem cards by giving or withholding approval.

In pointing to this aspect of the turn-of-the-century view of the learner, I do not mean to derogate the historic achievement of the connectionist formulation of learning. But the essential point remains, a conception of the learner as an ideationally empty organism associating discrete stimuli and responses through the operation of rewards and punishments under the control of the teacher. Both the stimulus - what was supposed to be learned - and the response - what was actually learned - were believed to be determined by the teacher.

It was no accident that the materials and methods of instruction and the form of the classroom were teacher-centred. The teacher was necessarily placed in front of the classroom - sometimes on a dais or platform - and the pupils in chairs rigidly fastened to the floor in straight rows facing forward so they would not turn away from the only source of the learning experience: the teacher. Given this contemporary vision of the learner, what could be a more eminently practical and sensible image of the ideal learning environment? Indeed, there is a letter by John Dewey dating from this period in which he complains that when he was trying to equip his new school according to his different conception of child as learner, he was unable to find any other kind of classroom furniture.

**Sub questions**

Question Number : 46 Question Id : 2105297986 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The early child was thought of as

1. Intelligent enough to know both pain and pleasure
2. Having no power of cognition
3. Not amenable to specific stimuli
4. Having motivational effect in a random way

Options :

21052931381. 1

21052931382. 2

21052931383. 3

21052931384. 4

Question Number : 47 Question Id : 2105297987 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The basic idea behind laboratory experiment was related to

1. Motivating the child with reward and punishment
2. Considering hunger and thirst as negligible in impact
3. Animals and children having the same drive
4. Teachers controlling children

Options :

21052931385. 1

21052931386. 2

21052931387. 3

21052931388. 4

Question Number : 48 Question Id : 2105297988 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The connectionist formula placed importance on

1. Withholding negative stimuli
2. Teacher-centric motivation
3. Search for specific responses
4. Doing experiments in laboratories

**Options :**

21052931389. 1

21052931390. 2

21052931391. 3

21052931392. 4

**Question Number : 49 Question Id : 2105297989 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

What was expected of pupils during those early days?

1. To create an ideal learning environment
2. To be in the forefront of the classroom
3. Be attentive towards classroom teaching
4. To place the teacher on the higher pedestal

**Options :**

21052931393. 1

21052931394. 2

21052931395. 3

21052931396. 4

**Question Number : 50 Question Id : 2105297990 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

What did John Dewey say of child learning?

1. Teacher as the only source of knowledge
2. The learner should be given incentives for learning
3. The existing educational environment was ideal
4. The focus should be on child as a learner

**Options :**

21052931397. 1

21052931398. 2

21052931399. 3

21052931400. 4

**Question Id : 2105297985 Question Type : COMPREHENSION Sub Question Shuffling Allowed :**

**Yes Group Comprehension Questions : No**

**Question Numbers : (46 to 50)**

**Question Label : Comprehension**

**नीचे दिए गए गद्यांश को पढ़िए और प्रश्नों के उत्तर दीजिए :**

विगत शताब्दी के अंत में अधिगमकर्ता के रूप में बालक के संबंध में एक प्रबल अवधारणा यह रही है कि वह संज्ञानात्मक दृष्टि से कोरा जीव है जो उद्दीपन पर लग-भग निरुद्देश्यता से प्रतिक्रिया देता है तथा वह सुख और दुःख की मध्यस्थता द्वारा विशेष उद्दीपकों की प्रस्तुति के फलस्वरूप विनिर्दिष्ट अनुक्रियाओं से विशेषतया सीख लेता है। यह माना जाता था कि वह सीखने या सोचने के लिए स्वयं पहल नहीं करता, जब तक कि उसे प्रणोदकों यथा: क्षुधा एवं पिपासा या बाह्य रूप में अनुप्रयुक्त प्रेरकों यथा: पुरस्कार एवं दण्ड द्वारा बाध्य न कर दिया जाए। प्रयोगशालाओं में प्रयोगकर्ता पहली पेटिकाओं के माध्यम से जीवों को भोजन देकर या उससे वंचित कर सही अनुक्रियाओं को संयोजित करते थे तथा शिक्षक भी इसी प्रकार बच्चों में समस्या - कार्ड के माध्यम से सहमति देकर या उसे रोक कर सही अनुक्रियाओं को सिखाते थे।

अधिगमकर्ता की इसी प्रकार की अवधारणा का उल्लेख करते हुए, जो शताब्दी के अंत में प्रचलित थी, मैं अधिगम के संबंधवादी प्रतिपादन का जो ऐतिहासिक महत्त्व वाला है, उसका उपहास नहीं करना चाहता। मूल बात यह है कि अधिगमकर्ता एक वैचारिक रूप में रिक्त जीव की श्रेणी में था, जिसे शिक्षक द्वारा प्रयुक्त पुरस्कार एवं दण्ड के माध्यम से नियंत्रणाधीन माना जाता था। दोनों ही, यथा: उद्दीपक, जिसे अधिगम किया जाना अभिप्रेत था तथा अनुक्रिया, जिसे वास्तविक रूप में अधिगम किया जाना था, को शिक्षक द्वारा निर्धारित किया जाना अंगीकृत था।

यह केवल संयोग ही नहीं था कि अनुदेशन की सामग्रियां एवं विधियां तथा कक्षागत परिवेश शिक्षण-केंद्रित थे। शिक्षक को कक्षा में अग्रणी दर्जा प्राप्त था, कभी उसे मंच या विशेष स्थान देकर तथा विद्यार्थियों को सीधी पंक्ति में अपनी कुर्सियों पर अवस्थित रख कर, जिससे वे अधिगम के अनुभव के स्रोत के रूप में शिक्षक से विमुख न हों। अधिगमकर्ता की इस समसामयिक दृष्टि पर निक्षेप करते हुए आदर्श अधिगम परिवेश की व्यावहारिक एवं समझ-योग्य छवि और क्या बन सकती है। इसी कालावधि में जॉन डेवी द्वारा एक पत्र लिखा गया, जिसमें उन्होंने शिकायत की कि वे जब अपने नवीन विद्यालय के अधिगमकर्ता बालक की परिवर्तित भूमिका के परिप्रेक्ष्य में सज्जित कर रहे थे तो उन्हें काक्षागृह के लिए अन्य प्रकार के फर्नीचर अनुपलब्ध थे।

**Sub questions**

**Question Number : 46 Question Id : 2105297986 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

प्रारम्भ में बालक को किस रूप में माना गया था ?

1. दुःख और सुख दोनों के अवबोध में पर्याप्त प्रज्ञावान
2. संज्ञान की शक्ति न होना
3. विशेष उद्दीपक के प्रति ग्रहणशील नहीं
4. यादृच्छिक तरीके से अभिप्रेरणात्मक प्रभाव रखना

**Options :**

21052931381. 1

21052931382. 2



21052931383. 3

21052931384. 4

**Question Number : 47 Question Id : 2105297987 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

प्रयोगशाला के प्रयोग किससे संबंधित थे ?

1. पुरस्कार और दण्ड द्वारा बालक को अभिप्रेरणा देना
2. क्षुधा और पिपासा को प्रभाव में नगण्य मानना
3. पशुओं और बालकों दोनों में समान प्रकार की प्रेरणा होना
4. शिक्षकों द्वारा बालकों को नियंत्रित करना

**Options :**

21052931385. 1

21052931386. 2

21052931387. 3

21052931388. 4

**Question Number : 48 Question Id : 2105297988 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

संबंधवादी सूत्र ने किसको महत्त्व दिया था ?

1. नकारात्मक उद्दीपक को रोकना
2. शिक्षण-केन्द्रित अभिप्रेरण
3. विशेष अनुक्रियाओं को खोजना
4. प्रयोगशालाओं में प्रयोग करना

**Options :**

21052931389. 1

21052931390. 2

21052931391. 3

21052931392. 4



Question Number : 49 Question Id : 2105297989 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

प्रारम्भिक काल में विद्यार्थियों से क्या अपेक्षा की जाती थी ?

1. एक आदर्श अधिगम परिवेश का निर्माण करना
2. कक्षा में अग्रणी रहना
3. कक्षा में शिक्षण के प्रति एकाग्र रहना
4. शिक्षक को उच्चतर स्थान देना

Options :

21052931393. 1

21052931394. 2

21052931395. 3

21052931396. 4

Question Number : 50 Question Id : 2105297990 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

जॉन डेवी ने बालक के अधिगम के बारे में क्या कहा था ?

1. शिक्षक ज्ञान के एकमात्र स्रोत के रूप में।
2. अधिगमकर्ता को अधिगम हेतु अभिप्रेरक प्रदान किए जाने चाहिए।
3. प्रचलित शिक्षा का परिवेश आदर्श रूप का था।
4. एक अधिगमकर्ता के रूप में बालक पर ध्यान केन्द्रित किया जाना चाहिए।

Options :

21052931397. 1

21052931398. 2

21052931399. 3

21052931400. 4

## PART II Environmental Science Education

Section Id :	21052996
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	92
Number of Questions to be attempted :	92
Section Marks :	200
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	210529306
Question Shuffling Allowed :	Yes

Question Number : 51 Question Id : 2105297991 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Good absorbers are good emitters. This statement refers to which of the following laws?

1. Stefan's Law
2. Wien's Displacement Law
3. Planck's Law
4. Kirchhoff's Law

Options :

21052931401. 1  
21052931402. 2  
21052931403. 3  
21052931404. 4

Question Number : 51 Question Id : 2105297991 Question Type : MCQ Option Shuffling : No



**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

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**Correct Marks : 2 Wrong Marks : 0**

Good absorbers are good emitters. This statement refers to which of the following laws?

1. Stefan's Law
2. Wien's Displacement Law
3. Planck's Law
4. Kirchhoff's Law

**Options :**

21052931401. 1
21052931402. 2
21052931403. 3
21052931404. 4

**Question Number : 52 Question Id : 2105297992 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

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**Correct Marks : 2 Wrong Marks : 0**

A sample of air has a relative humidity of 60%. Given that the Saturated Vapour Pressure of water is 2260 Pa, calculate the vapour pressure of the air at 20°C.

1. ~ 1460 Pa
2. ~ 452 Pa
3. ~ 3767 Pa
4. ~ 1356 Pa

**Options :**

21052931405. 1
21052931406. 2
21052931407. 3
21052931408. 4

**Question Number : 52 Question Id : 2105297992 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

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**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

A sample of air has a relative humidity of 60%. Given that the Saturated Vapour Pressure of water is 2260 Pa, calculate the vapour pressure of the air at 20°C.

1. ~ 1460 Pa
2. ~ 452 Pa
3. ~ 3767 Pa
4. ~ 1356 Pa

**Options :**

21052931405. 1

21052931406. 2

21052931407. 3

21052931408. 4

**Question Number : 53 Question Id : 2105297993 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following is short-lived species in the atmosphere?

1. CH<sub>4</sub>
2. CO
3. N<sub>2</sub>O
4. OH radical

**Options :**

21052931409. 1

21052931410. 2

21052931411. 3

21052931412. 4

**Question Number : 53 Question Id : 2105297993 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following is short-lived species in the atmosphere?

1.  $\text{CH}_4$
2.  $\text{CO}$
3.  $\text{N}_2\text{O}$
4. OH radical

**Options :**

21052931409. 1

21052931410. 2

21052931411. 3

21052931412. 4

**Question Number : 54 Question Id : 2105297994 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The chemical composition of CFC-113 is

1.  $\text{CF}_2\text{ClCFCl}_2$
2.  $\text{CFHClCFCl}_2$
3.  $\text{CF}_3\text{CF}_2\text{Cl}_2$
4.  $\text{CF}_2\text{HCF}_2\text{Cl}_2$

**Options :**

21052931413. 1

21052931414. 2

21052931415. 3

21052931416. 4

**Question Number : 54 Question Id : 2105297994 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The chemical composition of CFC-113 is

1.  $\text{CF}_2\text{ClCFCl}_2$
2.  $\text{CFHClCFCl}_2$
3.  $\text{CF}_3\text{CF}_2\text{Cl}_2$
4.  $\text{CF}_2\text{HCF}_2\text{Cl}_2$

**Options :**

21052931413. 1

21052931414. 2

21052931415. 3

21052931416. 4

**Question Number : 55 Question Id : 2105297995 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Soil humic acids are

1. Insoluble in alkali
2. Insoluble in acid
3. Soluble in acid
4. Insoluble in both acid and alkali

**Options :**

21052931417. 1

21052931418. 2

21052931419. 3

21052931420. 4

**Question Number : 55 Question Id : 2105297995 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Soil humic acids are

1. Insoluble in alkali
2. Insoluble in acid
3. Soluble in acid
4. Insoluble in both acid and alkali

**Options :**

21052931417. 1

21052931418. 2

21052931419. 3

21052931420. 4

**Question Number : 56 Question Id : 2105297996 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Volatile Organic Compounds (VOCs) are of great concern because:

1. Once such compounds are in the vapour state, they are difficult to control in the environment.
2. Most of them are ozone depleting substances
3. They contribute to a general increase in reactive hydrocarbons in the atmosphere.
4. They are less soluble in water.

**Options :**

21052931421. 1

21052931422. 2

21052931423. 3

21052931424. 4

**Question Number : 56 Question Id : 2105297996 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Volatile Organic Compounds (VOCs) are of great concern because:

1. Once such compounds are in the vapour state, they are difficult to control in the environment.
2. Most of them are ozone depleting substances
3. They contribute to a general increase in reactive hydrocarbons in the atmosphere.
4. They are less soluble in water.

**Options :**

21052931421. 1

21052931422. 2

21052931423. 3

21052931424. 4

**Question Number : 57 Question Id : 2105297997 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Hyperthermophilic microorganisms prefer temperatures in excess of.

1. 45°C
2. 80°C
3. 65°C
4. 70°C

**Options :**

21052931425. 1

21052931426. 2

21052931427. 3

21052931428. 4

**Question Number : 57 Question Id : 2105297997 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Hyperthermophilic microorganisms prefer temperatures in excess of.



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1. 45°C
2. 80°C
3. 65°C
4. 70°C

**Options :**

21052931425. 1

21052931426. 2

21052931427. 3

21052931428. 4

**Question Number : 58 Question Id : 2105297998 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The most toxic form of mercury in water is

1.  $\text{Hg}^{2+}$
2.  $\text{H}_3\text{C} - \text{Hg}^+$
3.  $\text{Hg}^0$
4.  $\text{Hg}^+$



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**Options :**

21052931429. 1

21052931430. 2

21052931431. 3

21052931432. 4

**Question Number : 58 Question Id : 2105297998 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



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The most toxic form of mercury in water is

1.  $\text{Hg}^{2+}$
2.  $\text{H}_3\text{C} - \text{Hg}^+$
3.  $\text{Hg}^0$
4.  $\text{Hg}^+$

**Options :**

21052931429. 1

21052931430. 2

21052931431. 3

21052931432. 4

**Question Number : 59 Question Id : 2105297999 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

One Dobson unit, represents the ozone layer of thickness

1. One-hundredth of a centimeter
2. One-tenth of a centimetre
3. One-hundredth of a millimeter
4. One-thousandth of a millimeter

**Options :**

21052931433. 1

21052931434. 2

21052931435. 3

21052931436. 4

**Question Number : 59 Question Id : 2105297999 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



One Dobson unit, represents the ozone layer of thickness

1. One-hundredth of a centimeter
2. One-tenth of a centimetre
3. One-hundredth of a millimeter
4. One-thousandth of a millimeter

**Options :**

21052931433. 1

21052931434. 2

21052931435. 3

21052931436. 4

**Question Number : 60 Question Id : 2105298000 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The transitional zone (ecotone) between freshwater and terrestrial ecosystems is known as

1. Riparian Zone
2. Hyporheic zone
3. Benthic zone
4. Epilimnetic zone

**Options :**

21052931437. 1

21052931438. 2

21052931439. 3

21052931440. 4

**Question Number : 60 Question Id : 2105298000 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The transitional zone (ecotone) between freshwater and terrestrial ecosystems is known as

1. Riparian Zone
2. Hyporheic zone
3. Benthic zone
4. Epilimnetic zone

**Options :**

21052931437. 1

21052931438. 2

21052931439. 3

21052931440. 4

**Question Number : 61 Question Id : 2105298001 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which one of the following silicate clay minerals exhibits highest interlayer expansion?

1. Montmorillonite
2. Vermiculite
3. Chlorite
4. Kaolinite

**Options :**

21052931441. 1

21052931442. 2

21052931443. 3

21052931444. 4

**Question Number : 61 Question Id : 2105298001 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which one of the following silicate clay minerals exhibits highest interlayer expansion?

1. Montmorillonite
2. Vermiculite
3. Chlorite
4. Kaolinite

**Options :**

21052931441. 1

21052931442. 2

21052931443. 3

21052931444. 4

**Question Number : 62 Question Id : 2105298002 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Beside steam, next gas in order of abundance emitted from a volcanic eruption is

1. Sulphur dioxide
2. Nitrogen dioxide
3. Carbon dioxide
4. Carbon monoxide

**Options :**

21052931445. 1

21052931446. 2

21052931447. 3

21052931448. 4

**Question Number : 62 Question Id : 2105298002 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Beside steam, next gas in order of abundance emitted from a volcanic eruption is

1. Sulphur dioxide
2. Nitrogen dioxide
3. Carbon dioxide
4. Carbon monoxide

**Options :**

21052931445. 1

21052931446. 2

21052931447. 3

21052931448. 4

**Question Number : 63 Question Id : 2105298003 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Heteromorphic rocks have

1. Same mineral composition arising from similar magmas under different conditions of crystallization.
2. Different mineral composition arising from similar magmas under different conditions of crystallization.
3. Different mineral composition arising from different magmas under different conditions of crystallization.
4. Same mineral composition arising from different magmas under different conditions of crystallization.

**Options :**

21052931449. 1

21052931450. 2

21052931451. 3

21052931452. 4

**Question Number : 63 Question Id : 2105298003 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Heteromorphic rocks have

1. Same mineral composition arising from similar magmas under different conditions of crystallization.
2. Different mineral composition arising from similar magmas under different conditions of crystallization.
3. Different mineral composition arising from different magmas under different conditions of crystallization.
4. Same mineral composition arising from different magmas under different conditions of crystallization.

**Options :**

21052931449. 1

21052931450. 2

21052931451. 3

21052931452. 4

**Question Number : 64 Question Id : 2105298004 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

A rock composed entirely of crystals is said to be

1. Hypocrystalline
2. Microcrystalline
3. Holocrystalline
4. Holohyaline

**Options :**

21052931453. 1

21052931454. 2

21052931455. 3

21052931456. 4

**Question Number : 64 Question Id : 2105298004 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

A rock composed entirely of crystals is said to be

1. Hypocrystalline
2. Microcrystalline
3. Holocrystalline
4. Holohyaline

**Options :**

21052931453. 1

21052931454. 2

21052931455. 3

21052931456. 4

**Question Number : 65 Question Id : 2105298005 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

A Si-solar cell has the minority carrier saturation current =  $60 \text{ nAm}^{-2}$  and solar radiation-induced current =  $600 \text{ Am}^{-2}$ . If the ambient temperature is  $27^\circ\text{C}$ , what is the open-circuit voltage of the solar cell?

1.  $\sim 0.6 \text{ V}$
2.  $\sim 0.45 \text{ V}$
3.  $\sim 0.5 \text{ V}$
4.  $\sim 1.5 \text{ V}$

**Options :**

21052931457. 1

21052931458. 2

21052931459. 3

21052931460. 4

**Question Number : 65 Question Id : 2105298005 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

### Option Orientation : Vertical

**Correct Marks : 2 Wrong Marks : 0**

A Si-solar cell has the minority carrier saturation current =  $60 \text{ nAm}^{-2}$  and solar radiation-induced current =  $600 \text{ Am}^{-2}$ . If the ambient temperature is  $27^\circ\text{C}$ , what is the open-circuit voltage of the solar cell?

1.  $\sim 0.6 \text{ V}$
2.  $\sim 0.45 \text{ V}$
3.  $\sim 0.5 \text{ V}$
4.  $\sim 1.5 \text{ V}$

### Options :

21052931457. 1

21052931458. 2

21052931459. 3

21052931460. 4

**Question Number : 66 Question Id : 2105298006 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

### Option Orientation : Vertical

**Correct Marks : 2 Wrong Marks : 0**

Which one among the following Solar Collectors has the highest Concentration Ratio or CR value (a measure of the efficiency of the Solar Collectors)?

1. Compound Parabolic Collector with a plane receiver
2. Cylindrical Parabolic Collector
3. Fresnel Lens Collector
4. Paraboloid dish collector

### Options :

21052931461. 1

21052931462. 2

21052931463. 3

21052931464. 4

**Question Number : 66 Question Id : 2105298006 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which one among the following Solar Collectors has the highest Concentration Ratio or CR value (a measure of the efficiency of the Solar Collectors)?

1. Compound Parabolic Collector with a plane receiver
2. Cylindrical Parabolic Collector
3. Fresnel Lens Collector
4. Paraboloid dish collector

**Options :**

21052931461. 1

21052931462. 2

21052931463. 3

21052931464. 4

**Question Number : 67 Question Id : 2105298007 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The fast neutrons produced in the process of nuclear fission of  $^{235}\text{U}$ , have an average energy of about

1. 100 keV
2. 1.0 Mev
3. 2.0 Mev
4. 2.6 Mev

**Options :**

21052931465. 1

21052931466. 2

21052931467. 3

21052931468. 4

**Question Number : 67 Question Id : 2105298007 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**



**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The fast neutrons produced in the process of nuclear fission of  $^{235}\text{U}$ , have an average energy of about

1. 100 keV
2. 1.0 MeV
3. 2.0 MeV
4. 2.6 MeV

**Options :**

21052931465. 1

21052931466. 2

21052931467. 3

21052931468. 4

**Question Number : 68 Question Id : 2105298008 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

A small hydropower station based on the conversion of the kinetic energy of a river water generates power. If the flow of water is  $10 \text{ m}^3\text{s}^{-1}$  and the speed of water is  $3 \text{ ms}^{-1}$ , what is the maximum power the station can generate? (Assume efficiency of the power station to be 0.6)

1. 18 kW
2. 27 kW
3. 36 kW
4. 45 kW

**Options :**

21052931469. 1

21052931470. 2

21052931471. 3

21052931472. 4

**Question Number : 68 Question Id : 2105298008 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical****Correct Marks : 2 Wrong Marks : 0**

A small hydropower station based on the conversion of the kinetic energy of a river water generates power. If the flow of water is  $10 \text{ m}^3\text{s}^{-1}$  and the speed of water is  $3 \text{ ms}^{-1}$ , what is the maximum power the station can generate? (Assume efficiency of the power station to be 0.6)

1. 18 kW
2. 27 kW
3. 36 kW
4. 45 kW

**Options :**

21052931469. 1

21052931470. 2

21052931471. 3

21052931472. 4

**Question Number : 69 Question Id : 2105298009 Question Type : MCQ Option Shuffling : No****Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No****Option Orientation : Vertical****Correct Marks : 2 Wrong Marks : 0**

The maximum cross-section for the fusion reaction  ${}^2_1\text{H} + {}^3_1\text{H}$  is reached at energies of nuclei at

1.  $\sim 10 \text{ keV}$
2.  $\sim 100 \text{ keV}$
3.  $\sim 1.0 \text{ keV}$
4.  $\sim 17.6 \text{ keV}$

**Options :**

21052931473. 1

21052931474. 2

21052931475. 3

21052931476. 4

**Question Number : 69 Question Id : 2105298009 Question Type : MCQ Option Shuffling : No****Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The maximum cross-section for the fusion reaction  ${}^2_1\text{H} + {}^3_1\text{H}$  is reached at energies of nuclei at

1.  $\sim 10$  keV
2.  $\sim 100$  keV
3.  $\sim 1.0$  keV
4.  $\sim 17.6$  keV

**Options :**

21052931473. 1

21052931474. 2

21052931475. 3

21052931476. 4

**Question Number : 70 Question Id : 2105298010 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

According to National Ambient Air Quality Standards (NAAQS), the annual limits for  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  in ecologically sensitive areas (in  $\mu\text{g}/\text{m}^3$ ) are

1. 100 and 60, respectively
2. 60 and 40, respectively
3. 40 and 20, respectively
4. 40 and 15, respectively

**Options :**

21052931477. 1

21052931478. 2

21052931479. 3

21052931480. 4

**Question Number : 70 Question Id : 2105298010 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

According to National Ambient Air Quality Standards (NAAQS), the annual limits for PM<sub>10</sub> and PM<sub>2.5</sub> in ecologically sensitive areas (in  $\mu\text{g}/\text{m}^3$ ) are

1. 100 and 60, respectively
2. 60 and 40, respectively
3. 40 and 20, respectively
4. 40 and 15, respectively

**Options :**

21052931477. 1

21052931478. 2

21052931479. 3

21052931480. 4

**Question Number : 71 Question Id : 2105298011 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

At 1 atm pressure and 25°C temperature, NO<sub>2</sub> concentration of 80 ppb is equivalent to

1. 40  $\mu\text{g}/\text{m}^3$
2. 160  $\mu\text{g}/\text{m}^3$
3. 240  $\mu\text{g}/\text{m}^3$
4. 150.4  $\mu\text{g}/\text{m}^3$

**Options :**

21052931481. 1

21052931482. 2

21052931483. 3

21052931484. 4

**Question Number : 71 Question Id : 2105298011 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

At 1 atm pressure and 25°C temperature, NO<sub>2</sub> concentration of 80 ppb is equivalent to

1. 40 µg/m<sup>3</sup>
2. 160 µg/m<sup>3</sup>
3. 240 µg/m<sup>3</sup>
4. 150.4 µg/m<sup>3</sup>

**Options :**

21052931481. 1

21052931482. 2

21052931483. 3

21052931484. 4

**Question Number : 72 Question Id : 2105298012 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

What is the sound pressure level (in dB) associated with a root mean square pressure of 100 Pa?

1. 148 dB
2. 134 dB
3. 120 dB
4. 110 dB

**Options :**

21052931485. 1

21052931486. 2

21052931487. 3

21052931488. 4

**Question Number : 72 Question Id : 2105298012 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

What is the sound pressure level (in dB) associated with a root mean square pressure of 100 Pa?

1. 148 dB
2. 134 dB
3. 120 dB
4. 110 dB

**Options :**

21052931485. 1
21052931486. 2
21052931487. 3
21052931488. 4

**Question Number : 73 Question Id : 2105298013 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

In the 'A' weighting network used in noise measurements, sounds of which of the following frequencies would require the least correction?

1. 31.5 Hz
2. 125 Hz
3. 1000 Hz
4. 12500 Hz

**Options :**

21052931489. 1
21052931490. 2
21052931491. 3
21052931492. 4

**Question Number : 73 Question Id : 2105298013 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

In the 'A' weighting network used in noise measurements, sounds of which of the following frequencies would require the least correction?

1. 31.5 Hz
2. 125 Hz
3. 1000 Hz
4. 12500 Hz

**Options :**

21052931489. 1
21052931490. 2
21052931491. 3
21052931492. 4

**Question Number : 74 Question Id : 2105298014 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

A N-fixing actinomycete associated with higher plants is:

1. Azospirillum
2. Clostridium
3. Frankia
4. Anabaena

**Options :**

21052931493. 1
21052931494. 2
21052931495. 3
21052931496. 4

**Question Number : 74 Question Id : 2105298014 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

A N-fixing actinomycete associated with higher plants is:

1. Azospirillum
2. Clostridium
3. Frankia
4. Anabaena

**Options :**

21052931493. 1

21052931494. 2

21052931495. 3

21052931496. 4

**Question Number : 75 Question Id : 2105298015 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Basel convention (1989) was designed to:

1. Reduce global waste generation
2. Control hazardous waste generation
3. Determine safe handling measures for hazardous waste
4. Prevent trans-boundary movement of hazardous waste between nations

**Options :**

21052931497. 1

21052931498. 2

21052931499. 3

21052931500. 4

**Question Number : 75 Question Id : 2105298015 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



Basel convention (1989) was designed to:

1. Reduce global waste generation
2. Control hazardous waste generation
3. Determine safe handling measures for hazardous waste
4. Prevent trans-boundary movement of hazardous waste between nations

**Options :**

21052931497. 1

21052931498. 2

21052931499. 3

21052931500. 4

**Question Number : 76 Question Id : 2105298016 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following is NOT an epigeic earthworm species?

1. *Eisenia fetida*
2. *Eisenia andrei*
3. *Metaphire posthuma*
4. *Eudrilus eugeniae*

**Options :**

21052931501. 1

21052931502. 2

21052931503. 3

21052931504. 4

**Question Number : 76 Question Id : 2105298016 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following is NOT an epigeic earthworm species?



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1. *Eisenia fetida*
2. *Eisenia andrei*
3. *Metaphire posthuma*
4. *Eudrilus eugeniae*

**Options :**

21052931501. 1

21052931502. 2

21052931503. 3

21052931504. 4

**Question Number : 77 Question Id : 2105298017 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following is the major product of slow pyrolysis of biomass?



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1. Biochar
2. Biogas
3. Carbon monoxide
4. Carbon dioxide

**Options :**

21052931505. 1

21052931506. 2

21052931507. 3

21052931508. 4

**Question Number : 77 Question Id : 2105298017 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



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Which among the following is the major product of slow pyrolysis of biomass?

1. Biochar
2. Biogas
3. Carbon monoxide
4. Carbon dioxide

**Options :**

21052931505. 1

21052931506. 2

21052931507. 3

21052931508. 4

**Question Number : 78 Question Id : 2105298018 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following are the dominant products of anaerobic digestion of municipal solid waste?

1. CO<sub>2</sub> and H<sub>2</sub>
2. CH<sub>4</sub> and CO<sub>2</sub>
3. CH<sub>4</sub>, CO<sub>2</sub>, and H<sub>2</sub>
4. O<sub>2</sub> and H<sub>2</sub>S

**Options :**

21052931509. 1

21052931510. 2

21052931511. 3

21052931512. 4

**Question Number : 78 Question Id : 2105298018 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following are the dominant products of anaerobic digestion of municipal solid waste?

1. CO<sub>2</sub> and H<sub>2</sub>
2. CH<sub>4</sub> and CO<sub>2</sub>
3. CH<sub>4</sub>, CO<sub>2</sub>, and H<sub>2</sub>
4. O<sub>2</sub> and H<sub>2</sub>S

**Options :**

21052931509. 1

21052931510. 2

21052931511. 3

21052931512. 4

**Question Number : 79 Question Id : 2105298019 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Ecological engineering is based on which one of the four classes of ecotechnology?

1. Use of ecosystems to reduce a pollution problem
2. Imitation of ecosystems to reduce pollution leading to constructed ecosystems
3. Recovery of ecosystems after significant disturbances
4. Use of ecosystems for benefit of humanity without destroying ecological balance

**Options :**

21052931513. 1

21052931514. 2

21052931515. 3

21052931516. 4

**Question Number : 79 Question Id : 2105298019 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Ecological engineering is based on which one of the four classes of ecotechnology?

1. Use of ecosystems to reduce a pollution problem
2. Imitation of ecosystems to reduce pollution leading to constructed ecosystems
3. Recovery of ecosystems after significant disturbances
4. Use of ecosystems for benefit of humanity without destroying ecological balance

**Options :**

21052931513. 1

21052931514. 2

21052931515. 3

21052931516. 4

**Question Number : 80 Question Id : 2105298020 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

What is the maximum period valid for granting Environmental Clearance (EC) for mining projects?

1. 30 Years
2. 10 Years
3. 5 Years
4. 20 Years

**Options :**

21052931517. 1

21052931518. 2

21052931519. 3

21052931520. 4

**Question Number : 80 Question Id : 2105298020 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

What is the maximum period valid for granting Environmental Clearance (EC) for mining projects?

1. 30 Years
2. 10 Years
3. 5 Years
4. 20 Years

**Options :**

21052931517. 1
21052931518. 2
21052931519. 3
21052931520. 4

**Question Number : 81 Question Id : 2105298021 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The Environmental Relief fund was created under :

1. Environmental Protection Act
2. Forest Conservation Act
3. Public Liability Insurance Act
4. Wildlife Protection Act

**Options :**

21052931521. 1
21052931522. 2
21052931523. 3
21052931524. 4

**Question Number : 81 Question Id : 2105298021 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The Environmental Relief fund was created under :

1. Environmental Protection Act
2. Forest Conservation Act
3. Public Liability Insurance Act
4. Wildlife Protection Act

**Options :**

21052931521. 1

21052931522. 2

21052931523. 3

21052931524. 4

**Question Number : 82 Question Id : 2105298022 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which one of the categories of development projects does NOT require an Environmental Impact Assessment (EIA) report?

1. Category 'A' projects
2. Category 'B<sub>2</sub>' projects
3. Category 'B<sub>1</sub>' projects
4. Category 'B<sub>1</sub>' and 'B<sub>2</sub>' projects

**Options :**

21052931525. 1

21052931526. 2

21052931527. 3

21052931528. 4

**Question Number : 82 Question Id : 2105298022 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which one of the categories of development projects does NOT require an Environmental Impact Assessment (EIA) report?

1. Category 'A' projects
2. Category 'B<sub>2</sub>' projects
3. Category 'B<sub>1</sub>' projects
4. Category 'B<sub>1</sub>' and 'B<sub>2</sub>' projects

**Options :**

21052931525. 1

21052931526. 2

21052931527. 3

21052931528. 4

**Question Number : 83 Question Id : 2105298023 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

According to Solid Waste Management Rules 2016, a landfill site should be at a distance of how many meters away from a pond?

1. 200 meters
2. 150 meters
3. 100 meters
4. 50 meters

**Options :**

21052931529. 1

21052931530. 2

21052931531. 3

21052931532. 4

**Question Number : 83 Question Id : 2105298023 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



According to Solid Waste Management Rules 2016, a landfill site should be at a distance of how many meters away from a pond?

1. 200 meters
2. 150 meters
3. 100 meters
4. 50 meters

**Options :**

21052931529. 1

21052931530. 2

21052931531. 3

21052931532. 4

**Question Number : 84 Question Id : 2105298024 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

In an objective type examination, hundred questions are given. One mark is given for each correct answer while 0.2 marks are deducted for each incorrect answer. The number of marks scored by students appearing in the examination is an example of :

1. Nominal variable
2. Ordinal variable
3. Discrete variable
4. Continuous variable

**Options :**

21052931533. 1


21052931534. 2

21052931535. 3

21052931536. 4

**Question Number : 84 Question Id : 2105298024 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

In an objective type examination, hundred questions are given. One mark is given for each correct answer while 0.2 marks are deducted for each incorrect answer. The number of marks scored by students appearing in the examination is an example of :  Downloaded [FREE](#) from KumarEdu.com

1. Nominal variable
2. Ordinal variable
3. Discrete variable
4. Continuous variable

**Options :**

21052931533. 1
21052931534. 2
21052931535. 3
21052931536. 4

**Question Number : 85 Question Id : 2105298025 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

If the mean of two groups of 'm' and 'n' observations are 40 and 60 respectively, and the combined mean of two groups is 48, the ratio m:n is  Downloaded [FREE](#) from KumarEdu.com

1. 2:3
2. 3:2
3. 1:2
4. 2:1

**Options :**

21052931537. 1
21052931538. 2
21052931539. 3
21052931540. 4

**Question Number : 85 Question Id : 2105298025 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

If the mean of two groups of 'm' and 'n' observations are 40 and 60 respectively, and the combined mean of two groups is 48, the ratio m:n is

1. 2:3
2. 3:2
3. 1:2
4. 2:1

**Options :**

21052931537. 1
21052931538. 2
21052931539. 3
21052931540. 4

**Question Number : 86 Question Id : 2105298026 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following is a correct statement regarding range as a measure of dispersion?

1. The range is independent of the change of origin and scale
2. The range is independent of the change of origin but not of the scale
3. The range is independent of the change of scale but not of the origin
4. The range is not affected by fluctuations of sampling

**Options :**

21052931541. 1
21052931542. 2
21052931543. 3
21052931544. 4

**Question Number : 86 Question Id : 2105298026 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following is a correct statement regarding range as a measure of dispersion?

1. The range is independent of the change of origin and scale
2. The range is independent of the change of origin but not of the scale
3. The range is independent of the change of scale but not of the origin
4. The range is not affected by fluctuations of sampling

**Options :**

21052931541. 1

21052931542. 2

21052931543. 3

21052931544. 4

**Question Number : 87 Question Id : 2105298027 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

If  $\sum x = 230$ ,  $\sum x^2 = 6500$  and the numbers of observations  $N = 10$ , the value of standard deviation is

1. 9
2. 10
3. 11
4. 12

**Options :**

21052931545. 1

21052931546. 2

21052931547. 3

21052931548. 4

**Question Number : 87 Question Id : 2105298027 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

If  $\sum x = 230$ ,  $\sum x^2 = 6500$  and the numbers of observations  $N=10$ , the value of standard deviation is

1. 9
2. 10
3. 11
4. 12

**Options :**

21052931545. 1
21052931546. 2
21052931547. 3
21052931548. 4

**Question Number : 88 Question Id : 2105298028 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following does NOT fall under the major goals of the National Mission for Green India?

1. To increase forest/tree cover to the extent of five million hectares.
2. To improve/enhance eco-system services like carbon sequestration and storage, hydrological services and biodiversity.
3. To increase forest-based livelihood income of about three million households.
4. To study the traditional knowledge systems for community participation in adaptation and mitigation strategies.

**Options :**

21052931549. 1
21052931550. 2
21052931551. 3
21052931552. 4

**Question Number : 88 Question Id : 2105298028 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



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Which of the following does NOT fall under the major goals of the National Mission for Green India?

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1. To increase forest/tree cover to the extent of five million hectares.
2. To improve/enhance eco-system services like carbon sequestration and storage, hydrological services and biodiversity.
3. To increase forest-based livelihood income of about three million households.
4. To study the traditional knowledge systems for community participation in adaptation and mitigation strategies.

**Options :**

21052931549. 1

21052931550. 2

21052931551. 3

21052931552. 4

**Question Number : 89 Question Id : 2105298029 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**



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**Correct Marks : 2 Wrong Marks : 0**

Under the GRIHA Rating Norms, a building securing 57 points on a 100 point scale, will be assigned which of the following star ratings?

1. Two star
2. Three star
3. Four star
4. Five star

**Options :**

21052931553. 1

21052931554. 2

21052931555. 3

21052931556. 4

**Question Number : 89 Question Id : 2105298029 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**



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**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Under the GRIHA Rating Norms, a building securing 57 points on a 100 point scale, will be assigned which of the following star ratings?

1. Two star
2. Three star
3. Four star
4. Five star

**Options :**

21052931553. 1

21052931554. 2

21052931555. 3

21052931556. 4

**Question Number : 90 Question Id : 2105298030 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The Brundtland Commission Report was entitled

1. Limits to Growth
2. Our Common Future
3. Sustainable Development
4. Tragedy of Commons

**Options :**

21052931557. 1

21052931558. 2

21052931559. 3

21052931560. 4

**Question Number : 90 Question Id : 2105298030 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**



**Correct Marks : 2 Wrong Marks : 0**

The Brundtland Commission Report was entitled

1. Limits to Growth
2. Our Common Future
3. Sustainable Development
4. Tragedy of Commons

**Options :**

21052931557. 1

21052931558. 2

21052931559. 3

21052931560. 4

**Question Number : 91 Question Id : 2105298031 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements:

**Statement I:**

In clear water, the reflectance is very high in the visible region of the electromagnetic spectrum

**Statement II:**

Pure water strongly absorbs radiation from the mid-infrared spectral region

In light of the above statements, choose the **correct** answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is correct but Statement II is false
4. Statement I is incorrect but Statement II is true

**Options :**

21052931561. 1

21052931562. 2

21052931563. 3

21052931564. 4



Question Number : 91 Question Id : 2105298031 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Given below are two statements:

**Statement I:**

In clear water, the reflectance is very high in the visible region of the electromagnetic spectrum

**Statement II:**

Pure water strongly absorbs radiation from the mid-infrared spectral region

In light of the above statements, choose the **correct** answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is correct but Statement II is false
4. Statement I is incorrect but Statement II is true

**Options :**

21052931561. 1

21052931562. 2

21052931563. 3

21052931564. 4

Question Number : 92 Question Id : 2105298032 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Following are the examples of Persistent Organic Pollutants (POPs)



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A. Dioxin

B. Volatile Organic Compounds (VOCs)

C. Poly Chlorinated Biphenyl (PCBs)

C. Furans

E. Organochlorine pesticides

Choose the correct answer from the options given below:

1. A, B and C only
2. A, B, C and D only
3. A, D, and E only
4. A, C, D and E only

**Options :**

21052931565. 1

21052931566. 2

21052931567. 3

21052931568. 4



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**Question Number : 92 Question Id : 2105298032 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical  
Correct Marks : 2 Wrong Marks : 0**



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Choose the correct answer from the options given below:

1. A, B and C only
2. A, B, C and D only
3. A, D, and E only
4. A, C, D and E only

**Options :**

21052931565. 1

21052931566. 2

21052931567. 3

21052931568. 4



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**Question Number : 93 Question Id : 2105298033 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical  
Correct Marks : 2 Wrong Marks : 0**



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Consider the following statements regarding the solubility of gases in water



- A. The concentration of a dissolved gas in water is proportional to its partial pressure in the air
- B. The solubility of a gas in water remains unaffected as other dissolved material in it increases
- C. The solubility of a gas increases as temperature increases
- D. The solubility of gases in water is governed by Henry's law

Choose the correct answer from the options given below:

- 1. A and B only
- 2. B and C only
- 3. C and D only
- 4. A and D only

**Options :**

21052931569. 1

21052931570. 2

21052931571. 3

21052931572. 4



**Question Number : 93 Question Id : 2105298033 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statements regarding the solubility of gases in water

- A. The concentration of a dissolved gas in water is proportional to its partial pressure in the air
- B. The solubility of a gas in water remains unaffected as other dissolved material in it increases
- C. The solubility of a gas increases as temperature increases
- D. The solubility of gases in water is governed by Henry's law

Choose the correct answer from the options given below:

- 1. A and B only
- 2. B and C only
- 3. C and D only
- 4. A and D only



**Options :**

- 21052931569. 1
- 21052931570. 2
- 21052931571. 3
- 21052931572. 4

**Question Number : 94 Question Id : 2105298034 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statement regarding *ex-situ* bioremediation of contaminated soil:

- A. Bioremediation techniques can be applied at or very near the site of contamination.
- B. Biopiles and windrow composting are the most dominant *ex-situ* bioremediation techniques for treating contaminated soils.
- C. Biopiles can be formed with larger volumes of soil than windrows.
- D. Both biopiles and windrow composting are anaerobic processes.

Choose the correct answer from the options given below:

- 1. A and B only
- 2. B and D only
- 3. A, B and C only
- 4. A, B, and D only

**Options :**

- 21052931573. 1
- 21052931574. 2
- 21052931575. 3
- 21052931576. 4

**Question Number : 94 Question Id : 2105298034 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statement regarding *ex-situ* bioremediation of contaminated soil:

- A. Bioremediation techniques can be applied at or very near the site of contamination.
- B. Biopiles and windrow composting are the most dominant *ex-situ* bioremediation techniques for treating contaminated soils.
- C. Biopiles can be formed with larger volumes of soil than windrows.
- D. Both biopiles and windrow composting are anaerobic processes.

Choose the correct answer from the options given below:

- 1. A and B only
- 2. B and D only
- 3. A, B and C only
- 4. A, B, and D only

**Options :**

21052931573. 1

21052931574. 2

21052931575. 3

21052931576. 4

**Question Number : 95 Question Id : 2105298035 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

Diesel Exhaust Particles (DEP), known to manifest asthma-like features, are responsible for

- A. Chronic airway inflammation
- B. Mucus hypersecretion
- C. Airway expansion
- D. Marked infiltration of eosinophils
- E. Airway hyperresponsiveness

Choose the correct answer from the options given below

- 1. A, C, D and E only
- 2. A, B, C and D only
- 3. A, B, D, and E only
- 4. B, C, D and E only

**Options :**

21052931577. 1

21052931578. 2

21052931579. 3

21052931580. 4

**Question Number : 95 Question Id : 2105298035 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

Diesel Exhaust Particles (DEP), known to manifest asthma-like features, are responsible for

- A. Chronic airway inflammation
- B. Mucus hypersecretion
- C. Airway expansion
- D. Marked infiltration of eosinophils
- E. Airway hyperresponsiveness

Choose the correct answer from the options given below

- 1. A, C, D and E only
- 2. A, B, C and D only
- 3. A, B, D, and E only
- 4. B, C, D and E only

**Options :**

21052931577. 1

21052931578. 2

21052931579. 3

21052931580. 4

**Question Number : 96 Question Id : 2105298036 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**



Consider the following statements regarding the phytoremediation of metal contaminated sites:



- A. Natural abilities of certain plant species are utilized to remove or stabilize toxic metals.
- B. Certain species termed hyperaccumulators can adsorb 50-100 times larger amounts of metals compared to most ordinary plants.
- C. The best candidates for removal by phytoremediation are arsenic and cadmium
- D. The harvested hyperaccumulating plants can be recycled in agriculture

Choose the correct answer from the options given below

- 1. A only
- 2. A and B only
- 3. A, B, and C only
- 4. A, C, and D only

**Options :**

21052931581. 1

21052931582. 2

21052931583. 3

21052931584. 4



**Question Number : 96 Question Id : 2105298036 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**



Consider the following statements regarding the phytoremediation of metal contaminated sites:



- A. Natural abilities of certain plant species are utilized to remove or stabilize toxic metals.
- B. Certain species termed hyperaccumulators can adsorb 50-100 times larger amounts of metals compared to most ordinary plants.
- C. The best candidates for removal by phytoremediation are arsenic and cadmium
- D. The harvested hyperaccumulating plants can be recycled in agriculture

Choose the correct answer from the options given below

- 1. A only
- 2. A and B only
- 3. A, B, and C only
- 4. A, C, and D only

**Options :**

- 21052931581. 1
- 21052931582. 2
- 21052931583. 3
- 21052931584. 4



**Question Number : 97 Question Id : 2105298037 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**



Given below are two statements:

**Statement I:**

Many bacteria carry plasmids, which are much smaller pieces of DNA, also circular, and self-replicating.

**Statement II:**

Plasmids are vitally important in the context of the environmental biotechnology in that they frequently carry the genes for degradative pathways.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

**Options :**

21052931585. 1

21052931586. 2

21052931587. 3

21052931588. 4

**Question Number : 97 Question Id : 2105298037 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements:

**Statement I:**

Many bacteria carry plasmids, which are much smaller pieces of DNA, also circular, and self-replicating.

**Statement II:**

Plasmids are vitally important in the context of the environmental biotechnology in that they frequently carry the genes for degradative pathways.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

**Options :**

21052931585. 1

21052931586. 2

21052931587. 3

21052931588. 4

**Question Number : 98 Question Id : 2105298038 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statements regarding reactions in moderately acidic soils:

- A. Base saturation is higher than that in the strongly acidic soils.
- B. Free aluminium ions are abundant in soil solutions.
- C. Aluminium hydroxy ions act as exchangeable cations.
- D. 'Small amounts of readily exchangeable hydrogen contributes to soil acidity

Choose the correct answer from the options given below

- 1. A and B only
- 2. A, B and C only
- 3. A, C, and D only
- 4. B, C, and D only

**Options :**

21052931589. 1

21052931590. 2

21052931591. 3

21052931592. 4

**Question Number : 98 Question Id : 2105298038 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statements regarding reactions in moderately acidic soils:

- A. Base saturation is higher than that in the strongly acidic soils.
- B. Free aluminium ions are abundant in soil solutions.
- C. Aluminium hydroxy ions act as exchangeable cations.
- D. 'Small amounts of readily exchangeable hydrogen contributes to soil acidity

Choose the correct answer from the options given below

- 1. A and B only
- 2. A, B and C only
- 3. A, C, and D only
- 4. B, C, and D only

**Options :**

21052931589. 1

21052931590. 2

21052931591. 3

21052931592. 4

**Question Number : 99 Question Id : 2105298039 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements.

**Statement I:**

Cyclonic wind flow in the northern hemisphere is counter-clockwise.

**Statement II:**

If you stand with your back to the wind in the northern hemisphere, low pressure will be to your left and high pressure will be to your right.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

**Options :**

21052931593. 1

21052931594. 2

21052931595. 3

21052931596. 4

**Question Number : 99 Question Id : 2105298039 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements.

**Statement I:**

Cyclonic wind flow in the northern hemisphere is counter-clockwise.

**Statement II:**

If you stand with your back to the wind in the northern hemisphere, low pressure will be to your left and high pressure will be to your right.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

**Options :**

21052931593. 1

21052931594. 2

21052931595. 3

21052931596. 4

**Question Number : 100 Question Id : 2105298040 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



What is the correct increasing order of following rocks by per cent volume in the earth's crust?

A. Igneous rocks

B. Sedimentary rocks.

C. Metamorphic rocks

Choose the correct answer from the options given below:

1. A, B, C

2. C, B, A

3. A, C, B

4. B, C, A

**Options :**

21052931597. 1

21052931598. 2

21052931599. 3

21052931600. 4

**Question Number : 100 Question Id : 2105298040 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

What is the correct increasing order of following rocks by per cent volume in the earth's crust?

A. Igneous rocks

B. Sedimentary rocks.

C. Metamorphic rocks

Choose the correct answer from the options given below:

1. A, B, C

2. C, B, A

3. A, C, B

4. B, C, A

**Options :**

21052931597. 1

21052931598. 2



21052931599. 3

21052931600. 4

**Question Number : 101 Question Id : 2105298041 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical  
Correct Marks : 2 Wrong Marks : 0**

What is the correct sequence in decreasing order of hardness among the following?

A. Gypsum

B. Fluorite

C. Feldspar

D. Topaz

Choose the correct answer from the options given below:

1. C>D>B>A

2. D>B>C>A

3. D>C>B>A

4. C>D>A>B

**Options :**

21052931601. 1

21052931602. 2

21052931603. 3

21052931604. 4

**Question Number : 101 Question Id : 2105298041 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical  
Correct Marks : 2 Wrong Marks : 0**

What is the correct sequence in decreasing order of hardness among the following?

A. Gypsum

B. Fluorite

C. Feldspar

D. Topaz

Choose the correct answer from the options given below:

1.  $C > D > B > A$

2.  $D > B > C > A$

3.  $D > C > B > A$

4.  $C > D > A > B$

**Options :**

21052931601. 1

21052931602. 2

21052931603. 3

21052931604. 4

**Question Number : 102 Question Id : 2105298042 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

A random variable  $X$  follows Poisson distribution such that probabilities  $P(X=1) = P(X=2)$ . Now consider the following statements:

A. The mean of this Poisson distribution is 2.

B. The variance of this Poisson distribution is 2.

C. Probability  $P(X=0)$  is equal to  $e^{-2}$

D. Probability  $P(X=0) = P(X=1)$

Choose the correct answer from the options given below

1. A, B, and C only

2. B, C and D only

3. A, B and D only

4. A, C and D only

**Options :**

- 21052931605. 1
- 21052931606. 2
- 21052931607. 3
- 21052931608. 4

**Question Number : 102 Question Id : 2105298042 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

A random variable  $X$  follows Poisson distribution such that probabilities  $P(X=1) = P(X=2)$ . Now consider the following statements:

- A. The mean of this Poisson distribution is 2.
- B. The variance of this Poisson distribution is 2.
- C. Probability  $P(X=0)$  is equal to  $e^{-2}$
- D. Probability  $P(X=0) = P(X=1)$

Choose the correct answer from the options given below

- 1. A, B, and C only
- 2. B, C and D only
- 3. A, B and D only
- 4. A, C and D only

**Options :**

- 21052931605. 1
- 21052931606. 2
- 21052931607. 3
- 21052931608. 4

**Question Number : 103 Question Id : 2105298043 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Identify the correct sequence of the following countries/group of countries credited with the highest to the lowest shares of cumulative CO<sub>2</sub> emissions to date.

- A. USA
- B. China
- C. EU
- D. India
- E. Japan

Choose the correct answer from the options given below

- 1. A, B, C, E, D
- 2. A, C, E, D, B
- 3. A, C, B, D, E
- 4. A, C, B, E, D

**Options :**

- 21052931609. 1
- 21052931610. 2
- 21052931611. 3
- 21052931612. 4

**Question Number : 103 Question Id : 2105298043 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Identify the correct sequence of the following countries/group of countries credited with the highest to the lowest shares of cumulative CO<sub>2</sub> emissions to date.

- A. USA
- B. China
- C. EU
- D. India
- E. Japan

Choose the correct answer from the options given below

- 1. A, B, C, E, D
- 2. A, C, E, D, B
- 3. A, C, B, D, E
- 4. A, C, B, E, D

**Options :**

- 21052931609. 1
- 21052931610. 2
- 21052931611. 3
- 21052931612. 4

**Question Number : 104 Question Id : 2105298044 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Relative contribution (%) of the Green House Gases to global warming in decreasing order

A. Carbon dioxide

B. Methane

C. CFC-12

D. Nitrous oxide

Choose the correct answer from the options given below:

1.  $A > B > C > D$

2.  $A > B > D > C$

3.  $C > A > D > B$

4.  $C > A > B > D$

**Options :**

21052931613. 1

21052931614. 2

21052931615. 3

21052931616. 4

**Question Number : 104 Question Id : 2105298044 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Relative contribution (%) of the Green House Gases to global warming in decreasing order

A. Carbon dioxide

B. Methane

C. CFC-12

D. Nitrous oxide

Choose the correct answer from the options given below:

1.  $A > B > C > D$

2.  $A > B > D > C$

3.  $C > A > D > B$

4.  $C > A > B > D$

**Options :**

- 21052931613. 1
- 21052931614. 2
- 21052931615. 3
- 21052931616. 4

**Question Number : 105 Question Id : 2105298045 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statements regarding reactions of pesticides in soils:

- A. They may vaporize into the atmosphere without any chemical change.
- B. They do not move downward through the soil in solution form.
- C. They are resistant to microbial decay.
- D. They may be absorbed by plants.

Choose the **most appropriate** answer from the options given below

- 1. A and D only
- 2. A, B, and D only
- 3. A, C, and D only
- 4. A and C only

**Options :**

- 21052931617. 1
- 21052931618. 2
- 21052931619. 3
- 21052931620. 4

**Question Number : 105 Question Id : 2105298045 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statements regarding reactions of pesticides in soils:

- A. They may vaporize into the atmosphere without any chemical change.
- B. They do not move downward through the soil in solution form.
- C. They are resistant to microbial decay.
- D. They may be absorbed by plants.

Choose the **most appropriate** answer from the options given below

- 1. A and D only
- 2. A, B, and D only
- 3. A, C, and D only
- 4. A and C only

**Options :**

21052931617. 1

21052931618. 2

21052931619. 3

21052931620. 4

**Question Number : 106 Question Id : 2105298046 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following regarding the incineration process of solid waste.

- A. It is an oxidation process.
- B. The two major combustible chemical elements are carbon and hydrogen.
- C. Cellulose in the biowaste is transformed into organic acids.
- D. Excess source of air is not necessary.

Choose the correct answer from the options given below

- 1. A and C only
- 2. B and C only
- 3. A and B only
- 4. B and D only



**Options :**

21052931621. 1

21052931622. 2

21052931623. 3

21052931624. 4

**Question Number : 106 Question Id : 2105298046 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following regarding the incineration process of solid waste.

- A. It is an oxidation process.
- B. The two major combustible chemical elements are carbon and hydrogen.
- C. Cellulose in the biowaste is transformed into organic acids.
- D. Excess source of air is not necessary.

Choose the correct answer from the options given below

- 1. A and C only
- 2. B and C only
- 3. A and B only
- 4. B and D only

**Options :**

21052931621. 1

21052931622. 2

21052931623. 3

21052931624. 4

**Question Number : 107 Question Id : 2105298047 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: one is labelled as **Assertion A** and the other is labelled as

**Reason R**

**Assertion A:** The risks from radioactive liquid wastes are caused under decontamination, solidification and disposal procedures.

**Reason R:** The chemicals in radioactive liquid wastes are hazardous in nature.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
2. Both **A** and **R** are correct but **R** is **NOT** the correct explanation of **A**
3. **A** is correct but **R** is not correct
4. **A** is not correct but **R** is correct

**Options :**

21052931625. 1

21052931626. 2

21052931627. 3

21052931628. 4

**Question Number : 107 Question Id : 2105298047 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: one is labelled as **Assertion A** and the other is labelled as

**Reason R**

**Assertion A:** The risks from radioactive liquid wastes are caused under decontamination, solidification and disposal procedures.

**Reason R:** The chemicals in radioactive liquid wastes are hazardous in nature.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
2. Both **A** and **R** are correct but **R** is **NOT** the correct explanation of **A**
3. **A** is correct but **R** is not correct
4. **A** is not correct but **R** is correct

**Options :**

21052931625. 1

21052931626. 2

21052931627. 3

21052931628. 4

**Question Number : 108 Question Id : 2105298048 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements:

**Statement I:** Hazardous materials such as lead, mercury, and hexavalent chromium in one form or other are present in electronic wastes.

**Statement II:** Landfilling of electronic waste is the best operation from the environmental viewpoint.

In light of the above statements, choose the **correct** answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is correct but Statement II is false
4. Statement I is incorrect but Statement II is true

**Options :**

21052931629. 1

21052931630. 2

21052931631. 3

21052931632. 4

**Question Number : 108 Question Id : 2105298048 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements:

**Statement I:** Hazardous materials such as lead, mercury, and hexavalent chromium in one form or other are present in electronic wastes.

**Statement II:** Landfilling of electronic waste is the best operation from the environmental viewpoint.

In light of the above statements, choose the **correct** answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is correct but Statement II is false
4. Statement I is incorrect but Statement II is true

**Options :**

21052931629. 1

21052931630. 2

21052931631. 3

21052931632. 4

Question Number : 109 Question Id : 2105298049 Question Type : MCQ Option Shuffling : No

Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No

Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Provision of Extended Producer's Responsibility (EPR) of producer, importer and brand owner for collecting back the waste generated by their product has been in the

- A. Solid Waste Management Rules, 2016
- B. Construction & Demolition Waste Management Rules, 2016
- C. Plastic Waste Management Rules, 2016
- D. E-waste (Management) Rules, 2016
- E. Biomedical Waste Management Rules, 2016

Choose the **correct** answer from the options given below

- 1. A, B, D only
- 2. B, C, D only
- 3. C, D, E only
- 4. A, B, C, D only

**Options :**

- 21052931633. 1
- 21052931634. 2
- 21052931635. 3
- 21052931636. 4

**Question Number : 109 Question Id : 2105298049 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**

Provision of Extended Producer's Responsibility (EPR) of producer, importer and brand owner for collecting back the waste generated by their product has been in the

- A. Solid Waste Management Rules, 2016
- B. Construction & Demolition Waste Management Rules, 2016
- C. Plastic Waste Management Rules, 2016
- D. E-waste (Management) Rules, 2016
- E. Biomedical Waste Management Rules, 2016

Choose the **correct** answer from the options given below

- 1. A, B, D only
- 2. B, C, D only
- 3. C, D, E only
- 4. A, B, C, D only

**Options :**

- 21052931633. 1
- 21052931634. 2
- 21052931635. 3
- 21052931636. 4

**Question Number : 110 Question Id : 2105298050 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**



Given below are two statements:



**Statement I:** Increasing the productivity of forests to meet essential needs is one of the major objectives of the National Forest Policy, 1988.

**Statement II:** According to the National Forest Policy, 1988, no forest-based enterprise should provide employment to local people on a priority basis.

In light of the above statements, choose the **correct** answer from the options given below:

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is correct but Statement II is false
4. Statement I is incorrect but Statement II is true

**Options :**

21052931637. 1

21052931638. 2

21052931639. 3

21052931640. 4



**Question Number : 110 Question Id : 2105298050 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements:

**Statement I:** Increasing the productivity of forests to meet essential needs is one of the major objectives of the National Forest Policy, 1988.

**Statement II:** According to the National Forest Policy, 1988, no forest-based enterprise should provide employment to local people on a priority basis.

In light of the above statements, choose the **correct** answer from the options given below:

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is correct but Statement II is false
4. Statement I is incorrect but Statement II is true

**Options :**

21052931637. 1



21052931638. 2

21052931639. 3

21052931640. 4

**Question Number : 111 Question Id : 2105298051 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements:

**Statement I:** Covariance between two variables X and Y determines whether the correlation between them is negative or positive.

**Statement II:** The product of the standard deviation of two variables X and Y can be both positive or negative.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

**Options :**

21052931641. 1

21052931642. 2

21052931643. 3

21052931644. 4

**Question Number : 111 Question Id : 2105298051 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



Given below are two statements:

**Statement I:** Covariance between two variables X and Y determines whether the correlation between them is negative or positive.

**Statement II:** The product of the standard deviation of two variables X and Y can be both positive or negative.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

**Options :**

21052931641. 1

21052931642. 2

21052931643. 3

21052931644. 4

**Question Number : 112 Question Id : 2105298052 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statements regarding skewness:

- A. For a positively skewed distribution, the value of the mean is the greatest among the mean, median and mode.
- B. For a negatively skewed distribution, the median is greater than the mean.
- C. Karl Pearson's coefficient of skewness always lies between the limits  $\pm 1$
- D. Bowley's coefficient of skewness always lies between the limits  $\pm 1$

Choose the correct answer from the options given below

1. A, B and C only
2. B, C and D only
3. A, C, and D only
4. A, B and D only

**Options :**

- 21052931645. 1
- 21052931646. 2
- 21052931647. 3
- 21052931648. 4

**Question Number : 112 Question Id : 2105298052 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statements regarding skewness:

- A. For a positively skewed distribution, the value of the mean is the greatest among the mean, median and mode.
- B. For a negatively skewed distribution, the median is greater than the mean.
- C. Karl Pearson's coefficient of skewness always lies between the limits  $\pm 1$
- D. Bowley's coefficient of skewness always lies between the limits  $\pm 1$

Choose the correct answer from the options given below

- 1. A, B and C only
- 2. B, C and D only
- 3. A, C, and D only
- 4. A, B and D only

**Options :**

- 21052931645. 1
- 21052931646. 2
- 21052931647. 3
- 21052931648. 4

**Question Number : 113 Question Id : 2105298053 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statements about normal distribution:



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A. This distribution is applicable to continuous random variables.

B. It is a symmetrical distribution.

C. The mean of a standard normal distribution is 1.

D. The standard deviation of the standard normal distribution is 1.

Choose the correct answer from the options given below:

1. A, B, and C only
2. B, C, and D only
3. A, B, and D only
4. A, C, and D only

**Options :**

21052931649. 1

21052931650. 2

21052931651. 3

21052931652. 4



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**Question Number : 113 Question Id : 2105298053 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statements about normal distribution:

A. This distribution is applicable to continuous random variables.

B. It is a symmetrical distribution.

C. The mean of a standard normal distribution is 1.

D. The standard deviation of the standard normal distribution is 1.

Choose the correct answer from the options given below:

1. A, B, and C only
2. B, C, and D only
3. A, B, and D only
4. A, C, and D only



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**Options :**

- 21052931649. 1
- 21052931650. 2
- 21052931651. 3
- 21052931652. 4

**Question Number : 114 Question Id : 2105298054 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statements pertaining to sampling theory:

- A. The standard deviation of the sampling distribution of a statistic is known as its standard error.
- B. The precision of the sample estimate of some population parameter is the reciprocal of the standard error of the sampling distribution of the estimate.
- C. A Type - I error in hypothesis testing occurs when we accept a wrong null hypothesis.
- D. A Type - II error in hypothesis testing occurs when we reject a true null hypothesis.

Choose the correct answer from the options given below

- 1. A and B only
- 2. B and C only
- 3. A and C only
- 4. C and D only

**Options :**

- 21052931653. 1
- 21052931654. 2
- 21052931655. 3
- 21052931656. 4

**Question Number : 114 Question Id : 2105298054 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Consider the following statements pertaining to sampling theory:

- A. The standard deviation of the sampling distribution of a statistic is known as its standard error.
- B. The precision of the sample estimate of some population parameter is the reciprocal of the standard error of the sampling distribution of the estimate.
- C. A Type - I error in hypothesis testing occurs when we accept a wrong null hypothesis.
- D. A Type - II error in hypothesis testing occurs when we reject a true null hypothesis.

Choose the correct answer from the options given below

- 1. A and B only
- 2. B and C only
- 3. A and C only
- 4. C and D only

**Options :**

21052931653. 1

21052931654. 2

21052931655. 3

21052931656. 4

**Question Number : 115 Question Id : 2105298055 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



List I	List II
Instrument	Function
A.Campbell-Stokes Recorder	I. To measure the visible light flux
B.Pyraheliometer	II. To measure total solar irradiance on a plain surface
C.Pyranometer	III. To measure direct beam solar irradiance
D.Lux meter	IV. To measure the sunshine duration

Choose the correct answer from the options given below

1. A - I, B - III, C - II, D - IV
2. A - I, B - II, C - III, D - IV
3. A - IV, B - III, C - II, D - I
4. A - IV, B - I, C - II, D - III

**Options :**

21052931657. 1

21052931658. 2

21052931659. 3

21052931660. 4



**Question Number : 115 Question Id : 2105298055 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



Match **List I** (Instrument) with **List II** (Function)



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List I	List II
Instrument	Function
A.Campbell-Stokes Recorder	I. To measure the visible light flux
B.Pyraheliometer	II. To measure total solar irradiance on a plain surface
C.Pyranometer	III. To measure direct beam solar irradiance
D.Lux meter	IV. To measure the sunshine duration

Choose the correct answer from the options given below

1. A - I, B - III, C - II, D - IV
2. A - I, B - II, C - III, D - IV
3. A - IV, B - III, C - II, D - I
4. A - IV, B - I, C - II, D - III

**Options :**

21052931657. 1

21052931658. 2

21052931659. 3

21052931660. 4



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**Question Number : 116 Question Id : 2105298056 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



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Match **List I** ( Analysis) with **List II** (Analytical techniques)



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List I	List II
Analysis	Analytical techniques
A. To analyze organic compounds of pollutants	I. SEM
B. To analyze the elemental composition of pollutants	II. XRD
C. Morphological analysis of pollutants	III. FTIR
D. To analyze crystalline materials of pollutants	IV. XRF

Choose the correct answer from the options given below

1. A - III, B - II, C - IV, D - I
2. A - IV, B - III, C - I, D - II
3. A - III, B - IV, C - I, D - II
4. A - IV, B - III, C - II, D - I

**Options :**

21052931661. 1

21052931662. 2

21052931663. 3

21052931664. 4



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**Question Number : 116 Question Id : 2105298056 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**



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Match **List I** ( Analysis) with **List II** (Analytical techniques)



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List I	List II
Analysis	Analytical techniques
A. To analyze organic compounds of pollutants	I. SEM
B. To analyze the elemental composition of pollutants	II. XRD
C. Morphological analysis of pollutants	III. FTIR
D. To analyze crystalline materials of pollutants	IV. XRF

Choose the correct answer from the options given below

1. A - III, B - II, C - IV, D - I
2. A - IV, B - III, C - I, D - II
3. A - III, B - IV, C - I, D - II
4. A - IV, B - III, C - II, D - I

**Options :**

21052931661. 1

21052931662. 2

21052931663. 3

21052931664. 4



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**Question Number : 117 Question Id : 2105298057 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**



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Match **List I** (Organism) with **List II** (Ecosystem structure components)



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List I	List-II
Organism	Ecosystem structure components
A. Earthworms	I. Producer
B. Grass	II. Secondary carnivore
C. Frogs	III. Primary carnivore
D. Hawks	IV. Detrivore

Choose the correct answer from the options given below

1. A - IV, B - I, C - II, D - III
2. A-II, B - III, C - IV, D - I
3. A - III, B - IV, C - I, D - II
4. A - IV, B - I, C - III, D - II

**Options :**

21052931665. 1

21052931666. 2

21052931667. 3

21052931668. 4



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**Question Number : 117 Question Id : 2105298057 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Match **List I** (Organism) with **List II** (Ecosystem structure components)

List I	List-II
Organism	Ecosystem structure components
A. Earthworms	I. Producer
B. Grass	II. Secondary carnivore
C. Frogs	III. Primary carnivore
D. Hawks	IV. Detrivore

Choose the correct answer from the options given below

1. A - IV, B - I, C - II, D - III
2. A-II, B - III, C - IV, D - I
3. A - III, B - IV, C - I, D - II
4. A - IV, B - I, C - III, D - II



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**Options :**

21052931665. 1

21052931666. 2

21052931667. 3

21052931668. 4

**Question Number : 118 Question Id : 2105298058 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Match **List I** (Elements) with **List II** (Characteristics)

List I	List II
Elements	Characteristics
A. Lithophile	I. Occur mainly as sulfides
B. Chalcophile	II. Gaseous elements do not generally form compounds
C. Siderophile	III. Occur mainly in oxygen compounds
D. Atmosphile	IV. Occur mainly as native elements

Choose the correct answer from the options given below:

1. A - I, B - II, C - III, D - IV
2. A - I, B - IV, C - III, D - II
3. A - III, B - IV, C - I, D - II
4. A - III, B - I, C - IV, D - II

**Options :**

21052931669. 1

21052931670. 2

21052931671. 3

21052931672. 4

**Question Number : 118 Question Id : 2105298058 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



List I	List II
Elements	Characteristics
A. Lithophile	I. Occur mainly as sulfides
B. Chalcophile	II. Gaseous elements do not generally form compounds
C. Siderophile	III. Occur mainly in oxygen compounds
D. Atmosphile	IV. Occur mainly as native elements

Choose the correct answer from the options given below:

1. A - I, B - II, C - III, D - IV
2. A - I, B - IV, C - III, D - II
3. A - III, B - IV, C - I, D - II
4. A - III, B - I, C - IV, D - II

**Options :**

21052931669. 1

21052931670. 2

21052931671. 3

21052931672. 4



**Question Number : 119 Question Id : 2105298059 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**



Match **List I** (Rock types) with **List II** (Characteristics)



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List I	List-II
Rock types	Characteristics
A. Rudaceous	I. Rocks consisting mainly of silt and siltstones
B. Arenaceous	II. Rocks consisting mainly of gravels, pebbles, cobbles, and boulders
C. Silt rocks	III. Rocks consisting mainly of dust, mud, and clay
D. Argillaceous	IV. Rocks consisting mainly of sands

Choose the correct answer from the options given below

1. A - II, B - I, C - IV, D - III
2. A - IV, B - II, C - I, D - III
3. A - IV, B - I, C - III, D - II
4. A - II, B - IV, C - I, D - III

**Options :**

21052931673. 1

21052931674. 2

21052931675. 3

21052931676. 4



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**Question Number : 119 Question Id : 2105298059 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 2 Wrong Marks : 0**



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Match **List I** (Rock types) with **List II** (Characteristics)



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List I	List-II
Rock types	Characteristics
A. Rudaceous	I. Rocks consisting mainly of silt and siltstones
B. Arenaceous	II. Rocks consisting mainly of gravels, pebbles, cobbles, and boulders
C. Silt rocks	III. Rocks consisting mainly of dust, mud, and clay
D. Argillaceous	IV. Rocks consisting mainly of sands

Choose the correct answer from the options given below

1. A - II, B - I, C - IV, D - III
2. A - IV, B - II, C - I, D - III
3. A - IV, B - I, C - III, D - II
4. A-II, B - IV, C - I, D - III

**Options :**

21052931673. 1

21052931674. 2

21052931675. 3

21052931676. 4



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**Question Number : 120 Question Id : 2105298060 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Match **List I** (Air pollutants) with **List II** (Control Technique/Equipment)

List-I	List-II
Air pollutants	Control Technique/Equipment
A. PM <sub>2.5</sub>	I. Selective catalytic reduction
B. SO <sub>2</sub>	II. Electrostatic precipitator
C. NO <sub>x</sub>	III. Cyclone collectors
D. Coarse particulate matter	IV. Scrubber

Choose the correct answer from the options given below

1. A - I, B - II, C - III, D - IV
2. A-II, B - IV, C - I, D - III
3. A - I, B - IV, C - II, D - III
4. A - IV, B - I, C - III, D - II



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**Options :**

21052931677. 1

21052931678. 2

21052931679. 3

21052931680. 4

**Question Number : 120 Question Id : 2105298060 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Match **List I** (Air pollutants) with **List II** (Control Technique/Equipment)

List-I	List-II
Air pollutants	Control Technique/Equipment
A. PM <sub>2.5</sub>	I. Selective catalytic reduction
B. SO <sub>2</sub>	II. Electrostatic precipitator
C. NO <sub>x</sub>	III. Cyclone collectors
D. Coarse particulate matter	IV. Scrubber

Choose the correct answer from the options given below

1. A - I, B - II, C - III, D - IV
2. A-II, B - IV, C - I, D - III
3. A - I, B - IV, C - II, D - III
4. A - IV, B - I, C - III, D - II

**Options :**

21052931677. 1

21052931678. 2

21052931679. 3

21052931680. 4

**Question Number : 121 Question Id : 2105298061 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



Match **List I** (Atmospheric stability) with **List II** (Lapse Rate)



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List-I	List-II
Atmospheric stability	Lapse Rate
A. Absolutely Stable	I. ELR = DALR
B. Absolutely Unstable	II. ELR < DALR
C. Conditionally Unstable	III. ELR > DALR
D. Dry Neutral	IV. SALR < ELR < DALR

Choose the correct answer from the options given below

1. A-II, B - III, C - I, D - IV
2. A-II, B - III, C - IV, D - I
3. A - III, B - II, C - IV, D - I
4. A - III, B - II, C - I, D - IV

**Options :**

21052931681. 1

21052931682. 2

21052931683. 3

21052931684. 4



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**Question Number : 121 Question Id : 2105298061 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Match **List I** (Atmospheric stability) with **List II** (Lapse Rate)

List-I	List-II
Atmospheric stability	Lapse Rate
A. Absolutely Stable	I. ELR = DALR
B. Absolutely Unstable	II. ELR < DALR
C. Conditionally Unstable	III. ELR > DALR
D. Dry Neutral	IV. SALR < ELR < DALR

Choose the correct answer from the options given below

1. A-II, B - III, C - I, D - IV
2. A-II, B - III, C - IV, D - I
3. A - III, B - II, C - IV, D - I
4. A - III, B - II, C - I, D - IV



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**Options :**

21052931681. 1

21052931682. 2

21052931683. 3

21052931684. 4

**Question Number : 122 Question Id : 2105298062 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Match **List I** Statistical Test) with **List II** (Applications)

List I	List-II
Statistical test	Applications
A. $\chi^2$ -test	I. Testing the significance of difference of means
B. One-Way ANOVA	II. Testing the significance of a single mean
C. Paired t-test	III. Testing the goodness of fit between theory and experiment
D. Z-test	IV. Comparing more than two sample means

Choose the correct answer from the options given below

1. A - I, B - II, C - III, D - IV
2. A-II, B - III, C - IV, D - I
3. A - III, B - IV, C - I, D - II
4. A - IV, B - I, C - II, D - III

**Options :**

21052931685. 1

21052931686. 2

21052931687. 3

21052931688. 4

**Question Number : 122 Question Id : 2105298062 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

Correct Marks : 2 Wrong Marks : 0

Match **List I** Statistical Test) with **List II** (Applications)

List I	List-II
Statistical test	Applications
A. $\chi^2$ -test	I. Testing the significance of difference of means
B. One-Way ANOVA	II. Testing the significance of a single mean
C. Paired t-test	III. Testing the goodness of fit between theory and experiment
D. Z-test	IV. Comparing more than two sample means

Choose the correct answer from the options given below

1. A - I, B - II, C - III, D - IV
2. A-II, B - III, C - IV, D - I
3. A - III, B - IV, C - I, D - II
4. A - IV, B - I, C - II, D - III

**Options :**

21052931685. 1

21052931686. 2

21052931687. 3

21052931688. 4

Question Number : 123 Question Id : 2105298063 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match **List I** (Environmentally significant Days) with **List II** (Dates)



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List-I	List-II
Environmentally significant Days	Dates
A. World Ozone Day	I. 16 September
B. World Habitat Day	II. 21 March
C. World Forest Day	III. 5 October
D. World Water Day	IV. 22 March

Choose the correct answer from the options given below

1. A - IV, B - III, C - I, D - II
2. A - II, B - I, C - IV, D - III
3. A - I, B - III, C - II, D - IV
4. A - III, B - I, C - IV, D - II

**Options :**

21052931689. 1

21052931690. 2

21052931691. 3

21052931692. 4



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**Question Number : 123 Question Id : 2105298063 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Match **List I** (Environmentally significant Days) with **List II** (Dates)

List-I	List-II
Environmentally significant Days	Dates
A. World Ozone Day	I. 16 September
B. World Habitat Day	II. 21 March
C. World Forest Day	III. 5 October
D. World Water Day	IV. 22 March

Choose the correct answer from the options given below

1. A - IV, B - III, C - I, D - II
2. A - II, B - I, C - IV, D - III
3. A - I, B - III, C - II, D - IV
4. A - III, B - I, C - IV, D - II



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**Options :**

21052931689. 1

21052931690. 2

21052931691. 3

21052931692. 4

**Question Number : 124 Question Id : 2105298064 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**Match **List-I** (Processes) with **List-II** (Energy Transfer)

List-I	List-II
Processes	Energy Transfer
A. Conduction	I. Energy is transferred by motion of a fluid
B. Convection	II. Energy is transferred in the form of electromagnetic waves through a vacuum.
C. Radiation	III. Energy is transferred between two points in a material at different temperatures
D. Evaporation	IV. Energy is lost through a phase change

Choose the correct answer from the options given below

1. A-II, B - I, C - III, D - IV
2. A-II, B - IV, C - III, D - I
3. A - III, B - IV, C - II, D - I
4. A - III, B - I, C - II, D - IV

**Options :**

21052931693. 1

21052931694. 2

21052931695. 3

21052931696. 4

**Question Number : 124 Question Id : 2105298064 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical****Correct Marks : 2 Wrong Marks : 0**Match **List-I** (Processes) with **List-II** (Energy Transfer)

List-I	List-II
Processes	Energy Transfer
A. Conduction	I. Energy is transferred by motion of a fluid
B. Convection	II. Energy is transferred in the form of electromagnetic waves through a vacuum.
C. Radiation	III. Energy is transferred between two points in a material at different temperatures
D. Evaporation	IV. Energy is lost through a phase change

Choose the correct answer from the options given below

1. A-II, B - I, C - III, D - IV
2. A-II, B - IV, C - III, D - I
3. A - III, B - IV, C - II, D - I
4. A - III, B - I, C - II, D - IV

**Options :**

21052931693. 1

21052931694. 2

21052931695. 3

21052931696. 4

**Question Number : 125 Question Id : 2105298065 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

A strategy favoured by r-selection is :

1. Higher proportional allocation to non-reproductive activities.
2. Living in environments imposing high-density independent mortality.
3. Living in environments imposing high-density dependent regulation.
4. Higher proportional allocation to reproductive activities.

**Options :**

21052931697. 1

21052931698. 2

21052931699. 3

21052931700. 4

**Question Number : 125 Question Id : 2105298065 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

A strategy favoured by r-selection is :

1. Higher proportional allocation to non-reproductive activities.
2. Living in environments imposing high-density independent mortality.
3. Living in environments imposing high-density dependent regulation.
4. Higher proportional allocation to reproductive activities.

**Options :**

21052931697. 1

21052931698. 2

21052931699. 3

21052931700. 4

**Question Number : 126 Question Id : 2105298066 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Traditionally membranes have been classified based on the minimum size of the contaminant that is excluded from passing through the particular membrane. Arrange the following in the correct sequence of decreasing pore size

- A. Reverse Osmosis
- B. Nanofiltration
- C. Microfiltration
- D. Ultrafiltration

Choose the correct answer from the options given below

- 1. A, B, C, D
- 2. D, C, B, A
- 3. C, D, B, A
- 4. D, C, A, B

**Options :**

- 21052931701. 1
- 21052931702. 2
- 21052931703. 3
- 21052931704. 4

**Question Number : 126 Question Id : 2105298066 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



Traditionally membranes have been classified based on the minimum size of the contaminant that is excluded from passing through the particular membrane. Arrange the following in the correct sequence of decreasing pore size

- A. Reverse Osmosis
- B. Nanofiltration
- C. Microfiltration
- D. Ultrafiltration

Choose the correct answer from the options given below

- 1. A, B, C, D
- 2. D, C, B, A
- 3. C, D, B, A
- 4. D, C, A, B

**Options :**

- 21052931701. 1
- 21052931702. 2
- 21052931703. 3
- 21052931704. 4

**Question Number : 127 Question Id : 2105298067 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**  
**Correct Marks : 2 Wrong Marks : 0**



For a given noise signal, what would be the correct order of noise indices in terms of increasing values?

A.  $L_{10}$

B.  $L_{50}$

C.  $L_1$

D.  $L_{90}$

Choose the correct answer from the options given below

1.  $C < A < B < D$

2.  $A < B < C < D$

3.  $D < C < B < A$

4.  $D < B < A < C$

**Options :**

21052931705. 1

21052931706. 2

21052931707. 3

21052931708. 4

**Question Number : 127 Question Id : 2105298067 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

For a given noise signal, what would be the correct order of noise indices in terms of increasing values?

A.  $L_{10}$

B.  $L_{50}$

C.  $L_1$

D.  $L_{90}$

Choose the correct answer from the options given below

1.  $C < A < B < D$
2.  $A < B < C < D$
3.  $D < C < B < A$
4.  $D < B < A < C$

**Options :**

21052931705. 1

21052931706. 2

21052931707. 3

21052931708. 4

**Question Number : 128 Question Id : 2105298068 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Identify the correct sequence of steps involved in the development of a model.

A. Validation

B. Formulation

C. Identification

D. Solution

Choose the correct answer from the options given below

1. A, B, C, D
2. B, C, D, A
3. C, B, D, A
4. C, D, B, A

**Options :**

- 21052931709. 1
- 21052931710. 2
- 21052931711. 3
- 21052931712. 4

**Question Number : 128 Question Id : 2105298068 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Identify the correct sequence of steps involved in the development of a model.

- A. Validation
- B. Formulation
- C. Identification
- D. Solution

Choose the correct answer from the options given below

- 1. A, B, C, D
- 2. B, C, D, A
- 3. C, B, D, A
- 4. C, D, B, A

**Options :**

- 21052931709. 1
- 21052931710. 2
- 21052931711. 3
- 21052931712. 4

**Question Number : 129 Question Id : 2105298069 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: one is labelled as **Assertion A** and other is labelled as

**Reason R**

**Assertion A:** Plants generally reflect radiation highly in the near-infrared region of the electromagnetic spectrum.

**Reason R:** Plant leaves generally contain high chlorophyll content.

In light of the above statements, choose the correct answer from the options given below

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

**Options :**

21052931713. 1

21052931714. 2

21052931715. 3

21052931716. 4

**Question Number : 129 Question Id : 2105298069 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: one is labelled as **Assertion A** and other is labelled as

**Reason R**

**Assertion A:** Plants generally reflect radiation highly in the near-infrared region of the electromagnetic spectrum.

**Reason R:** Plant leaves generally contain high chlorophyll content.

In light of the above statements, choose the correct answer from the options given below

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

**Options :**

21052931713. 1

21052931714. 2

21052931715. 3

21052931716. 4

**Question Number : 130 Question Id : 2105298070 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: One is labelled as **Assertion A** and other is labelled as **Reason R**

**Assertion A:** Tropopause acts as a 'lid' limiting both convection and transport from the troposphere into the higher layers of the atmosphere.

**Reason R:** At tropopause height and at higher levels, the atmosphere is stable.

In light of the above statements, choose the **correct** answer from the options given below

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

**Options :**

21052931717. 1

21052931718. 2

21052931719. 3

21052931720. 4

**Question Number : 130 Question Id : 2105298070 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: One is labelled as **Assertion A** and other is labelled as

**Reason R**

**Assertion A:** Tropopause acts as a 'lid' limiting both convection and transport from the troposphere into the higher layers of the atmosphere.

**Reason R:** At tropopause height and at higher levels, the atmosphere is stable.

In light of the above statements, choose the **correct** answer from the options given below

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

**Options :**

21052931717. 1

21052931718. 2

21052931719. 3

21052931720. 4

**Question Number : 131 Question Id : 2105298071 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: one is labelled as **Assertion A** and other is labelled as

**Reason R**

**Assertion A:** Isomorphous substitution is the source of constant charges on soil silicate clays.

**Reason R:** Cations of comparable size substitute each other in respective tetrahedral and octahedral sheets in silicate clays.

In light of the above statements, choose the **correct** answer from the options given below

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

**Options :**

21052931721. 1

21052931722. 2

21052931723. 3

21052931724. 4

**Question Number : 131 Question Id : 2105298071 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: one is labelled as **Assertion A** and other is labelled as **Reason R**

**Assertion A:** Isomorphous substitution is the source of constant charges on soil silicate clays.

**Reason R:** Cations of comparable size substitute each other in respective tetrahedral and octahedral sheets in silicate clays.

In light of the above statements, choose the **correct** answer from the options given below

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

**Options :**

21052931721. 1

21052931722. 2

21052931723. 3

21052931724. 4

**Question Number : 132 Question Id : 2105298072 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



Yaw control used in wind turbine generator is a:

1. Microprocessor-based control unit
2. The mechanism to keep the rotor axis along wind direction.
3. The mechanism to keep the rotor axis perpendicular to wind direction.
4. Gear mechanism to control the speed of the rotor when wind speed is extremely high

**Options :**

21052931725. 1

21052931726. 2

21052931727. 3

21052931728. 4

**Question Number : 132 Question Id : 2105298072 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Yaw control used in wind turbine generator is a:

1. Microprocessor-based control unit
2. The mechanism to keep the rotor axis along wind direction.
3. The mechanism to keep the rotor axis perpendicular to wind direction.
4. Gear mechanism to control the speed of the rotor when wind speed is extremely high

**Options :**

21052931725. 1

21052931726. 2

21052931727. 3

21052931728. 4

**Question Number : 133 Question Id : 2105298073 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



Given below are two statements: one is labelled as **Assertion A** and other is labelled as

**Reason R**

**Assertion A:** Some countries are immune to the impacts of climate change

**Reason R:** The net contribution of some countries is less than 1% towards the global CO<sub>2</sub> emissions as a whole.

In light of the above statements, choose the **correct** answer from the options given below

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

**Options :**

21052931729. 1

21052931730. 2

21052931731. 3

21052931732. 4

**Question Number : 133 Question Id : 2105298073 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: one is labelled as **Assertion A** and other is labelled as

**Reason R**

**Assertion A:** Some countries are immune to the impacts of climate change

**Reason R:** The net contribution of some countries is less than 1% towards the global CO<sub>2</sub> emissions as a whole.

In light of the above statements, choose the **correct** answer from the options given below

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

**Options :**

21052931729. 1

21052931730. 2

21052931731. 3

21052931732. 4

**Question Number : 134 Question Id : 2105298074 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: One is labelled as **Assertion A** and other is labelled as **Reason R**

**Assertion A:** Solar and wind energy systems require quite large structures relative to power produced.

**Reason R:** Energy flux densities associated with solar energy and wind energy are on average small.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
2. Both **A** and **R** are correct but **R** is **NOT** the correct explanation of **A**
3. **A** is correct but **R** is not correct
4. **A** is not correct but **R** is correct

**Options :**

21052931733. 1

21052931734. 2

21052931735. 3

21052931736. 4

**Question Number : 134 Question Id : 2105298074 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: One is labelled as **Assertion A** and other is labelled as

**Reason R**

**Assertion A:** Solar and wind energy systems require quite large structures relative to power produced.

**Reason R:** Energy flux densities associated with solar energy and wind energy are on average small.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
2. Both **A** and **R** are correct but **R** is **NOT** the correct explanation of **A**
3. **A** is correct but **R** is not correct
4. **A** is not correct but **R** is correct

**Options :**

21052931733. 1

21052931734. 2

21052931735. 3

21052931736. 4

**Question Number : 135 Question Id : 2105298075 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: one is labelled as Assertion A and other is labelled as Reason R

**Assertion A:** Hydrofluorocarbons (HFCs) and hydrochlorofluorocarbon (HCFCs) are used as substitute compounds for chlorofluorocarbons (CFCs)

**Reason R:** HCFCs and HFCs are quite susceptible to reaction with OH radicals in the troposphere

In light of the above statements, choose the **correct** answer from the options given below

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

**Options :**

21052931737. 1

21052931738. 2

21052931739. 3

21052931740. 4

**Question Number : 135 Question Id : 2105298075 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: one is labelled as Assertion A and other is labelled as Reason R

**Assertion A:** Hydrofluorocarbons (HFCs) and hydrochlorofluorocarbon (HCFCs) are used as substitute compounds for chlorofluorocarbons (CFCs)

**Reason R:** HCFCs and HFCs are quite susceptible to reaction with OH radicals in the troposphere

In light of the above statements, choose the **correct** answer from the options given below

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

**Options :**

21052931737. 1

21052931738. 2

21052931739. 3

21052931740. 4

**Question Number : 136 Question Id : 2105298076 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: one is labelled as **Assertion A** and other is labelled as

**Reason R**

**Assertion A:** Regression analysis is suitable for two variables having a linear causal relationship between them.

**Reason R:** The causal relationship between two variables is never curvilinear.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
2. Both **A** and **R** are correct but **R** is **NOT** the correct explanation of **A**
3. **A** is correct but **R** is not correct
4. **A** is not correct but **R** is correct

**Options :**

21052931741. 1

21052931742. 2

21052931743. 3

21052931744. 4

**Question Number : 136 Question Id : 2105298076 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements: one is labelled as **Assertion A** and other is labelled as

**Reason R**

**Assertion A:** Regression analysis is suitable for two variables having a linear causal relationship between them.

**Reason R:** The causal relationship between two variables is never curvilinear.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
2. Both **A** and **R** are correct but **R** is **NOT** the correct explanation of **A**
3. **A** is correct but **R** is not correct
4. **A** is not correct but **R** is correct

**Options :**



21052931741. 1

21052931742. 2

21052931743. 3

21052931744. 4

**Question Number : 137 Question Id : 2105298077 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements.

**Statement I:** Leslie's matrix population model is a discrete and age-independent model

**Statement II:** The first row in Leslie's projection matrix represents fertility

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

**Options :**

21052931745. 1

21052931746. 2

21052931747. 3

21052931748. 4

**Question Number : 137 Question Id : 2105298077 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Given below are two statements.



**Statement I:** Leslie's matrix population model is a discrete and age-independent model

**Statement II:** The first row in Leslie's projection matrix represents fertility

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

**Options :**

21052931745. 1

21052931746. 2

21052931747. 3

21052931748. 4

**Question Number : 138 Question Id : 2105298078 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Arrange the environmental movements in chronological order

- A. Silent Valley struggle
- B. Chipko movement
- C. Appiko movement
- D. Narmada Bachao movement

Choose the correct answer from the options given below

1. A, B, C, D
2. B, A, C, D
3. A, D, B, C,
4. A, B, D, C

**Options :**

21052931749. 1



21052931750. 2

21052931751. 3

21052931752. 4

**Question Number : 138 Question Id : 2105298078 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Arrange the environmental movements in chronological order

A. Silent Valley struggle

B. Chipko movement

C. Appiko movement

D. Narmada Bachao movement

Choose the correct answer from the options given below

1. A, B, C, D

2. B, A, C, D

3. A, D, B, C,

4. A, B, D, C

**Options :**

21052931749. 1

21052931750. 2

21052931751. 3

21052931752. 4

**Question Number : 139 Question Id : 2105298079 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**



Regarding Bharat Stage (BS-VI) vehicular emissions norms, choose the correct statements:



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- A. BS (VI) emission norms are equivalent to Euro (VI) norms.
- B. BS (VI) norms require the up-gradation of engine and emission control technology
- C. BS(VI) norms are applicable to all categories of the vehicles including two, three and four-wheelers.
- D. BS (VI) norms do not require any change in fuel quality

Choose the correct answer from the options given below

- 1. A, B, C, only
- 2. B, C, D only
- 3. A, C, D only
- 4. A, B, C, D - All

**Options :**

21052931753. 1

21052931754. 2

21052931755. 3

21052931756. 4



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**Question Number : 139 Question Id : 2105298079 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 2 Wrong Marks : 0**



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Regarding Bharat Stage (BS-VI) vehicular emissions norms, choose the correct statements:

- A. BS (VI) emission norms are equivalent to Euro (VI) norms.
- B. BS (VI) norms require the up-gradation of engine and emission control technology
- C. BS(VI) norms are applicable to all categories of the vehicles including two, three and four-wheelers.
- D. BS (VI) norms do not require any change in fuel quality

Choose the correct answer from the options given below

- 1. A, B, C, only
- 2. B, C, D only
- 3. A, C, D only
- 4. A, B, C, D - All

**Options :**

21052931753. 1

21052931754. 2

21052931755. 3

21052931756. 4

**Question Number : 140 Question Id : 2105298080 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following atmospheric constituents have a negative radiative forcing?

- A. Tropospheric ozone
- B. Stratospheric ozone
- C. Sulphate Aerosol
- D. Nitrous oxide

Choose the correct answer from the options given below

- 1. A and B only
- 2. B and C only
- 3. C and D only
- 4. A and D only

**Options :**

21052931757. 1

21052931758. 2

21052931759. 3

21052931760. 4

**Question Number : 140 Question Id : 2105298080 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following atmospheric constituents have a negative radiative forcing?

A. Tropospheric ozone

B. Stratospheric ozone

C. Sulphate Aerosol

D. Nitrous oxide

Choose the correct answer from the options given below

1. A and B only

2. B and C only

3. C and D only

4. A and D only

**Options :**

21052931757. 1

21052931758. 2

21052931759. 3

21052931760. 4

**Sub-Section Number :** 2

**Sub-Section Id :** 210529307

**Question Shuffling Allowed :** Yes

## Yes Group Comprehension Questions : No

Question Numbers : (141 to 145)

Question Label : Comprehension

**Read the given passage carefully and answer the questions that follow**

The colour photograph of Earthrise, taken by Apollo 8 astronaut William A. Anders on December 24, 1968, is a powerful and eloquent image. One leading environmentalist has rightfully described it as "the most influential environmental photograph ever taken". Inspired by the photograph, economist Kenneth E. Boulding summed up the finite nature of our planet as viewed in the context of the vast expanse of space in his metaphor "Spaceship Earth". What had been perceived throughout human history as a limitless frontier had suddenly become a tiny sphere: limited in its resources, crowded by an ever-expanding human population, and threatened by our use of the atmosphere and the oceans as repositories for our consumptive wastes.

### Sub questions

Question Number : 141 Question Id : 2105298082 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Perception of the planet Earth before 1968 was that it had

1. Infinite resources
2. Limited resources
3. Finite carrying capacity
4. Scarce resources

**Options :**

21052931761. 1

21052931762. 2

21052931763. 3

21052931764. 4

Question Number : 142 Question Id : 2105298083 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Carrying capacity of the Earth is threatened by

- A. Human population explosion
- B. Irrational use of atmosphere
- C. Dumping of consumptive wastes in the ocean
- D. Development of space technology

- 1. A, C and D only
- 2. B, C and D only
- 3. A, B and C only
- 4. A, B and D only

**Options :**

21052931765. 1

21052931766. 2

21052931767. 3

21052931768. 4

**Question Number : 143 Question Id : 2105298084 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Perception about the planet Earth is that, it is a

- 1. Tiny life support system
- 2. Vast life support system
- 3. Vast expanse of space
- 4. Limitless frontier in its extent

**Options :**

21052931769. 1

21052931770. 2

21052931771. 3

21052931772. 4

**Question Number : 144 Question Id : 2105298085 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

The metaphor "Spaceship Earth" was used to described the Earth as

1. Tiny sphere in the vast universe
2. Repository of natural resources
3. Consisting of modern space infrastructure
4. Unmanned spacecraft

**Options :**

21052931773. 1

21052931774. 2

21052931775. 3

21052931776. 4

**Question Number : 145 Question Id : 2105298086 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Inference of the passage is that the Earth is an ecosystem of

1. Infinite carrying capacity
2. Infinite resources for exploitation
3. Finite carrying capacity
4. Unlimited power of self-sustenance

**Options :**

21052931777. 1

21052931778. 2

21052931779. 3

21052931780. 4

**Question Id : 2105298081 Question Type : COMPREHENSION Sub Question Shuffling Allowed :**

## Yes Group Comprehension Questions : No

Question Numbers : (141 to 145)

Question Label : Comprehension

**Read the given passage carefully and answer the questions that follow**

The colour photograph of Earthrise, taken by Apollo 8 astronaut William A. Anders on December 24, 1968, is a powerful and eloquent image. One leading environmentalist has rightfully described it as "the most influential environmental photograph ever taken". Inspired by the photograph, economist Kenneth E. Boulding summed up the finite nature of our planet as viewed in the context of the vast expanse of space in his metaphor "Spaceship Earth". What had been perceived throughout human history as a limitless frontier had suddenly become a tiny sphere: limited in its resources, crowded by an ever-expanding human population, and threatened by our use of the atmosphere and the oceans as repositories for our consumptive wastes.

### Sub questions

Question Number : 141 Question Id : 2105298082 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Perception of the planet Earth before 1968 was that it had

1. Infinite resources
2. Limited resources
3. Finite carrying capacity
4. Scarce resources

**Options :**

21052931761. 1

21052931762. 2

21052931763. 3

21052931764. 4

Question Number : 142 Question Id : 2105298083 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No



**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Carrying capacity of the Earth is threatened by

- A. Human population explosion
- B. Irrational use of atmosphere
- C. Dumping of consumptive wastes in the ocean
- D. Development of space technology

- 1. A, C and D only
- 2. B, C and D only
- 3. A, B and C only
- 4. A, B and D only

**Options :**

21052931765. 1

21052931766. 2

21052931767. 3

21052931768. 4

**Question Number : 143 Question Id : 2105298084 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Perception about the planet Earth is that, it is a

- 1. Tiny life support system
- 2. Vast life support system
- 3. Vast expanse of space
- 4. Limitless frontier in its extent

**Options :**

21052931769. 1

21052931770. 2

21052931771. 3

21052931772. 4



Question Number : 144 Question Id : 2105298085 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The metaphor "Spaceship Earth" was used to described the Earth as

1. Tiny sphere in the vast universe
2. Repository of natural resources
3. Consisting of modern space infrastructure
4. Unmanned spacecraft

Options :

21052931773. 1

21052931774. 2

21052931775. 3

21052931776. 4

Question Number : 145 Question Id : 2105298086 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Inference of the passage is that the Earth is an ecosystem of

1. Infinite carrying capacity
2. Infinite resources for exploitation
3. Finite carrying capacity
4. Unlimited power of self-sustenance

Options :

21052931777. 1

21052931778. 2

21052931779. 3

21052931780. 4

Sub-Section Number :

Sub-Section Id :

**Question Shuffling Allowed :**

Yes

**Question Id : 2105298087 Question Type : COMPREHENSION Sub Question Shuffling Allowed :**

**Yes Group Comprehension Questions : No**

**Question Numbers : (146 to 150)**

**Question Label : Comprehension**

**Read the given passage and answer the questions that follow**

The fermentation products prior to 1900 AD were confined to potable alcohol and vinegar. However, the first true large-scale breweries date from the 1700s AD when wooden vats of 1500 barrels capacity were introduced. By the mid-1800s AD, the role of yeasts in alcohol fermentation had been demonstrated independently by Cagniard-Latour, Schwann and Kützing but it was Louis Pasteur who convinced the scientific world of the obligatory role of micro-organisms in the process. During the 1800s AD, Hansen started his pioneering work for isolating and propagating single yeast cells to produce pure culture. However, many traditional ale-producing breweries still use mixed yeast cultures. Vinegar was originally produced by leaving wine in shallow bowls or partially filled barrels where it was slowly oxidized to vinegar by the development of natural flora. The appreciation of the importance of air in the process led to the development of the 'generator'. Between the years, 1900 AD and 1940 AD, the most important advances were the development in the baker's yeast, solvent fermentation, citric acid production and lactic acid production.

**Sub questions**

**Question Number : 146 Question Id : 2105298088 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**

**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Vinegar is a product of

1. Solvent fermentation
2. Alcoholic fermentation
3. Aerobic fermentation
4. Anaerobic fermentation

**Options :**

21052931781. 1

21052931782. 2

21052931783. 3

21052931784. 4

**Question Number : 147 Question Id : 2105298089 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Many traditional ale-producing breweries use

1. Yeast pure culture
2. Mixed culture of bacteria
3. Mixed culture of yeasts
4. Bakers' yeast

**Options :**

21052931785. 1

21052931786. 2

21052931787. 3

21052931788. 4

**Question Number : 148 Question Id : 2105298090 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Who among the following first developed the method of producing a pure culture of yeasts?

1. Cagniard-Latour
2. Hansen
3. Louis Pasteur
4. Schwann and Kutzing

**Options :**

21052931789. 1

21052931790. 2

21052931791. 3

**Question Number : 149 Question Id : 2105298091 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

In pre-1900s AD, which types of vessels were used in large-scale breweries?

1. Wooden
2. Copper
3. Steel
4. Mechanical fermenters

**Options :**

21052931793. 1

21052931794. 2

21052931795. 3

21052931796. 4

**Question Number : 150 Question Id : 2105298092 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following is one of the oldest products of fermentation technology?

1. Bakers' yeast
2. Yeast biomass
3. Lactic acid
4. Alcohol

**Options :**

21052931797. 1

21052931798. 2

21052931799. 3

21052931800. 4

**Read the given passage and answer the questions that follow**

The fermentation products prior to 1900 AD were confined to potable alcohol and vinegar. However, the first true large-scale breweries date from the 1700s AD when wooden vats of 1500 barrels capacity were introduced. By the mid-1800s AD, the role of yeasts in alcohol fermentation had been demonstrated independently by Cagniard-Latour, Schwann and Kützing but it was Louis Pasteur who convinced the scientific world of the obligatory role of micro-organisms in the process. During the 1800s AD, Hansen started his pioneering work for isolating and propagating single yeast cells to produce pure culture. However, many traditional ale-producing breweries still use mixed yeast cultures. Vinegar was originally produced by leaving wine in shallow bowls or partially filled barrels where it was slowly oxidized to vinegar by the development of natural flora. The appreciation of the importance of air in the process led to the development of the 'generator'. Between the years, 1900 AD and 1940 AD, the most important advances were the development in the baker's yeast, solvent fermentation, citric acid production and lactic acid production.

**Sub questions**

Question Number : 146 Question Id : 2105298088 Question Type : MCQ Option Shuffling : No

Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No

Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Vinegar is a product of

1. Solvent fermentation
2. Alcoholic fermentation
3. Aerobic fermentation
4. Anaerobic fermentation

**Options :**

21052931781. 1

21052931782. 2

21052931783. 3

**Question Number : 147 Question Id : 2105298089 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Many traditional ale-producing breweries use

1. Yeast pure culture
2. Mixed culture of bacteria
3. Mixed culture of yeasts
4. Bakers' yeast

**Options :**

21052931785. 1

21052931786. 2

21052931787. 3

21052931788. 4

**Question Number : 148 Question Id : 2105298090 Question Type : MCQ Option Shuffling : No**  
**Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No**  
**Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

Who among the following first developed the method of producing a pure culture of yeasts?

1. Cagniard-Latour
2. Hansen
3. Louis Pasteur
4. Schwann and Kutzing

**Options :**

21052931789. 1

21052931790. 2

21052931791. 3

21052931792. 4



Question Number : 149 Question Id : 2105298091 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In pre-1900s AD, which types of vessels were used in large-scale breweries?

1. Wooden
2. Copper
3. Steel
4. Mechanical fermenters

Options :

21052931793. 1

21052931794. 2

21052931795. 3

21052931796. 4

Question Number : 150 Question Id : 2105298092 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No  
Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which among the following is one of the oldest products of fermentation technology?

1. Bakers' yeast
2. Yeast biomass
3. Lactic acid
4. Alcohol

Options :

21052931797. 1

21052931798. 2

21052931799. 3

21052931800. 4